

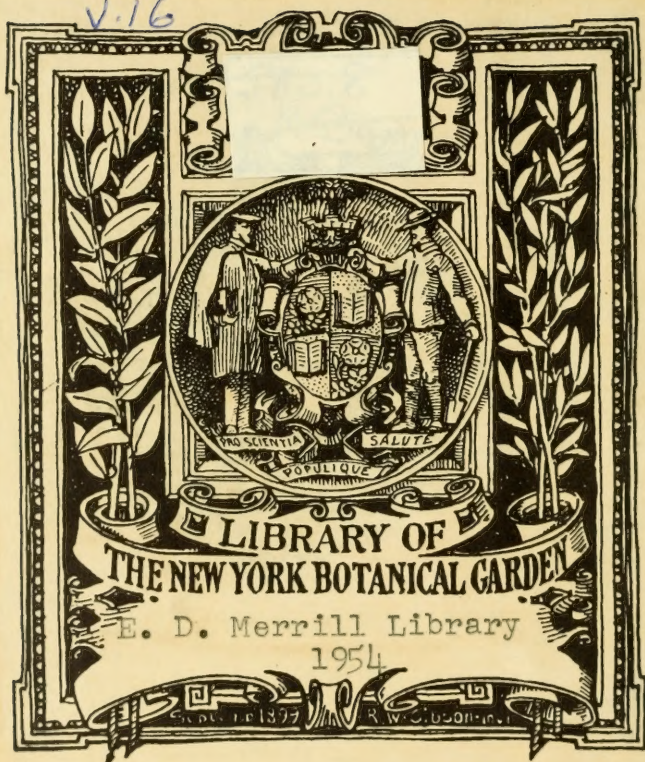
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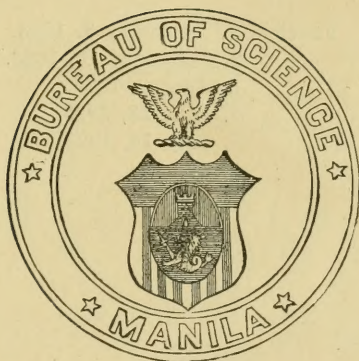
AN ENUMERATION OF PHILIPPINE FLOWERING PLANTS

BY

ELMER D. MERRILL

DIRECTOR AND BOTANIST, BUREAU OF SCIENCE

VOLUME 2



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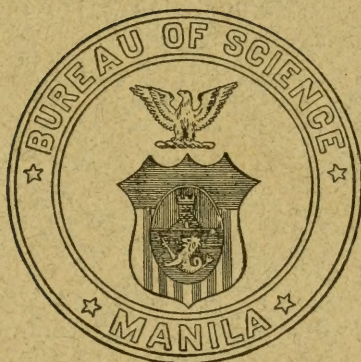
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EXPLANATORY NOTE

The present enumeration is an attempt to summarize in convenient form for consultation our present knowledge of Philippine flowering plants, and represents a part of the knowledge accumulated by the author during a course of about twenty years' study of the problem. In the work an attempt has been made to account for all binomials accredited to the Philippine flora; to adjust the synonymy when necessary; to include all important references to the Philippine botanical literature and essential references to extra-Philippine literature; to give the habitat, altitudinal range, and Philippine and extra-Philippine distribution of each species; to cite illustrative specimens where expedient or necessary; and to record all available local names for each species.

It is proposed to issue the present work in fascicles, utilizing one volume for the gymnosperms and the monocotyledons and two volumes for the dicotyledons. It is planned to publish full introductory and explanatory matter in a general introduction to be prefixed to Volume 1 when the entire enumeration is completed.

ELMER D. MERRILL.

MANILA, P. I., *August 25, 1921.*

AN ENUMERATION OF PHILIPPINE FLOWERING PLANTS

By ELMER D. MERRILL

Director and Botanist, Bureau of Science

DICOTYLEDONAE

CASUARINACEAE

1. CASUARINA Linnaeus

CASUARINA EUISETIFOLIA Linn. Amoen. Acad. 4 (1759) 143 (*equisetifolia*); Forst. Char. Gen. (1776) 103, f. 52; Miq. Fl. Ind. Bat. 1¹ (1857) 874; DC. Prodr. 16² (1868) 339; Blanco Fl. Filip. (1837) 661, ed. 2 (1845) 460, ed. 3, 3 (1879) 67; Vidal Sinopsis Atlas (1883) 41, t. 91, f. A, Rev. Pl. Vasc. Filip. (1886) 259, Phan. Cuming. Philip. (1885) 147; F.-Vill. Novis. App. (1880) 206; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 81, Fl. Manila (1912) 169, Sp. Blancoanae (1918) 118.

Throughout the Philippines along sandy seashores, extending inland in open sandy valleys along streams, in places growing at altitudes as high as 800 m; usually gregarious. Tropics of the Old World from Africa to Polynesia near the sea, pantropic in cultivation.

Local names: Agó (Ibn., Neg.); agóho (Tag., Ilk., Bis., Bik.); Agóo (Pang., Ilk., Kuy.); agóko (Pang.); agó-o (Ilk.); agóso (Pang., Tag.); agué (Ibn.); alaut (Bon.); antong (Is.); aróo (Ilk.); aróho (Ilk., Ting.); ayo (Bis.); káro (Ilk.); mahohók (Mbo.); malabohók (Bis.); maribuhók (Bis.).

CASUARINA RUMPHIANA Miq. in Flora 48 (1865) 23, 38; F.-Vill. Novis. App. (1880) 207; Ceron Cat. Pl. Herb. Manila (1892) 164.

Casuarina nodiflora Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 9, non Forst.

Northern Luzon to Mindanao and Palawan, in mountain forests, usually gregarious, altitude 100 to 1,100 m. Celebes, Moluccas.

Local names: Agó (Lan.); agóho (Bis., Tag.); ahgáho (P. Bis.); angól (Bik.); bunai (Tagb.); gó-o (Bag.); gouet (Ibn.); manholai (Mbo.); ó'o (Bag.); saplui (Mbo.).

CASUARINA SUMATRANA Jungh. in Hoev. & De Vriese Tijdschr. 11 (1844) 115; F.-Vill. Novis. App. (1880) 207 (excl. syn. Blanco); Ceron Cat. Pl. Herb. Manila (1892) 164.

Luzon (Sorsogon), Palawan, Leyte, Mindanao, in forests back of mangrove swamps. Burma to Sumatra, Borneo, and Java.

Local names: Agóho (Tag.); malianṅgin (Sul.); maribuhók (Bis.); pagospos (C. Bis.); pugaspas (Bis.); sampalog (Tagb.).

Sterile specimens from Luzon (Tayabas), Biliran, Samar, and Mindanao, *B. S.* 25523 Yates, 18728 McGregor, 13191 Foxworthy & Ramos, *F. B.* 20559 Miranda, may also represent this species or may represent the allied *Casuarina nodiflora* Forst. f. This form occurs in mountain forests, altitude 200 to 1,100 m.

SAURURACEAE

1. SAURURUS Plumier

SAURURUS CHINENSIS (Lour.) Baill. *Adansonia* 10 (1871) 71; Lond. Hort. Brit. (1830) 144, *nomen nudum*, Encycl. Pl. (1866) 289, *nomen subnudum*.

Spathium chinense Lour. Fl. Cochinch. (1790) 217.

Saururus cernuus Thunb. Fl. Jap. (1784) 154, non Linn.

Saururus loureiri Decne. in Ann. Sci. Nat. III 3 (1845) 102; C. DC. Prodr. 16¹ (1869) 239; F.-Vill. Novis. App. (1880) 174; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 219.

Saururopsis chinensis Turcz. in Bull. Soc. Nat. Mosc. 21¹ (1848) 589.

Saururopsis cumingii C. DC. Prodr. 16¹ (1869) 239.

Luzon (Ilocos Norte, Bontoc), *Cuming* 1259, *Vanoverbergh* 1159, 2710, *B. S.* 27167 Ramos. In swampy places, rice paddies, etc., altitude 50 to 1,100 m. Japan, central and southern China, and Formosa.

PIPERACEAE

1. PIPER Linnaeus

PIPER ABBREVIATUM Opiz in Presl Rel. Haenk. 1 (1828) 157; C. DC. in Leaf. Philip. Bot. 3 (1910) 775.

Piper chaba Blume in Verh. Bat. Genoots. 11 (1826) 168, *f.* 7; Miq. Syst. Pip. (1843) 251; C. DC. Prodr. 16¹ (1869) 347, Philip. Journ. Sci. 5 (1910) Bot. 432 (incl. formae *b*, *c*, *d*, *e*), 11 (1916) Bot. 216; F.-Vill. Novis. App. (1880) 175, non Hunter (1809).

Chavica chaba Miq. Fl. Ind. Bat. 1² (1858-59) 443.

Piper rubripunctulatum C. DC. in Perk. Frag. Fl. Philip. (1905) 158.

Piper parvispicum C. DC. in Perk. Frag. Fl. Philip. (1905) 156.

In forests at low and medium altitudes throughout the Philippines. Borneo, Java.

Local names: Alapápan (Mbo.); bagaybajon (Mbo.); buyo-buyo (Bik.); buyo-halo (P. Bis.); guti-guti (Bik.); halopai (Mbo.); kaligu-uan (Lan.); laingan (Sub.); lauigang (Tag.); lingolingo-daytoi (Bis.); manikatápai (Bag.); samaina (Mbo.); tандаон (Mbo.).

PIPER ABRAENSE C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 451.

Luzon (Abra), *B. S.* 7159 Ramos. In forests. Endemic.

PIPER ACUTIBACCUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 459.

Luzon (Laguna), *B. S.* 10031 Ramos. In forests at low altitudes. Endemic.

PIPER AGUSANENSE C. DC. in Leaf. Philip. Bot. 6 (1914) 2291, Philip. Journ. Sci. 11 (1916) Bot. 221.

Mindanao, Camiguin de Misamis, *Elmer* 13319, *B. S.* 14644 Ramos. In forests. Endemic.

Local name: Halopái (C. Bis.).

PIPER ALLENII C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 441.

Piper longivagins C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 444, 11 (1916) Bot. 219 (incl. forma b).

Luzon (Tayabas, Nueva Ecija, Laguna, Zambales, Rizal, Camarines), Mindanao (Surigao), *Allen 152, B. S. 6069 Robinson, 28797, 26496, 26497, 29094 Ramos & Edaño*. In primary forests at low and medium altitudes. Endemic.

PIPER ANGUSTIPELTATUM Merr. in Philip. Journ. Sci. 17 (1920) 244.

Luzon (Tayabas, east coast), *B. S. 28846 Ramos & Edaño*. In damp forests at low altitudes. Endemic.

PIPER ARBORESCENS Roxb. Hort. Beng. (1814) 80, Fl. Ind. 1 (1820) 161, ed. 2, 1 (1832) 159; Merr. Interpret. Herb. Amb. (1917) 180.

Piper miniatum Blume in Verh. Bat. Genoots. 11 (1826) 166; C. DC. Prodr. 16¹ (1869) 354, Leaf. Philip. Bot. 3 (1910) 766, Philip. Journ. Sci. 5 (1910) Bot. 422 (incl. formae a, b, c), 11 (1916) Bot. 208; F.-Vill. Novis. App. (1880) 175; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 219.

Chavica miniata Miq. Syst. Pip. (1843) 234, Nov. Act. Acad. Nat. Cur. 21 (1846) Suppl. 32, t. 28, Fl. Ind. Bat. 1² (1858-59) 440.

Piper glandulosa Opiz in Presl Rel. Haenk. 1 (1828) 158.

Northern Luzon to Palawan and Mindanao. Common in forests at low and medium altitudes. Malay Peninsula and Archipelago.

Local names: Lauiñgan (Buk.); mangolas (Sub.); manlakbayan (Mbo.); malabonyok (C. Bis.); opoi (Mbo.); parong (S. L. Bis.); tugpuan (Buk.).

Var. **HIRTELLUM** (Miq.) comb. nov.

Piper miniatum Blume var. *hirtellum* C. DC. in Leaf. Philip. Bot. 3 (1910) 776, Philip. Journ. Sci. 5 (1910) Bot. 422.

Chavica miniata Miq. var. *hirtella* Miq. Fl. Ind. Bat. Suppl. (1860-61) 473.

Mindanao (Davao), *Elmer 11229*. In primary forests, altitude about 750 m. Sumatra.

PIPER APOANUM C. DC. in Leaf. Philip. Bot. 3 (1910) 785, Philip. Journ. Sci. 5 (1910) Bot. 454.

Mindanao (Davao, Mt. Apo), *Elmer 11174*. In thickets, altitude about 800 m. Closely allied to *Piper viminale* Opiz. Endemic.

Local name: Manikatápai (Bag.).

PIPER ARBORISEDENS C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 223.

Luzon (Laguna), *B. S. 24934 Ramos*. In forests at low altitudes. Endemic.

PIPER ATROSPICUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 208.

Luzon (Tayabas), Leyte, *B. S. 15359, 28781, 28664 Ramos*. In forests at low and medium altitudes. Endemic. Very closely allied to *Piper allenii* C. DC.

PIPER AURILIMBUM C. DC. Leaf. Philip. Bot. 3 (1910) 768, Philip. Journ. Sci. 5 (1910) Bot. 425, 11 (1916) Bot. 210.

Luzon (Cagayan, Kalinga, Ifugao, Benguet), *Elmer 8866, B. S. 13980, 13946 Ramos, 37499, 37566, 37568 Ramos & Edaño, 19821 McGregor, Weber 1584*. In forests at medium altitudes. Endemic.

Local names: Dauusha-atab (Ig.); gauád (It.); gaid (Klg.); gók (Ibn.).

PIPER BACCATUM Blume in Verh. Bat. Genoots. 11 (1826) 172, t. 3; C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 462.

Piper sarcopodum C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 207.

Luzon (Laguna), Mindanao, *B. S. 23759 Ramos, Clemens, Elmer 14210, 19972*. In forests at medium altitudes. Borneo, Java.

Local name: Sambañganai (Mbo.).

PIPER BAGUIONUM C. DC. in Leaf. Philip. Bot. 3 (1910) 775, Philip. Journ. Sci. 5 (1910) Bot. 434.

Luzon (Benguet), *Elmer 5874, 8784*. In thickets, altitude about 1,500 m. Endemic.

PIPER BASILANUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 457.

Basilan, *Hallier*. Endemic. A species closely allied to *Piper caninum* Bl. and doubtfully distinct from *P. marivelesanum* C. DC. Endemic.

PIPER BATHICARPUM C. DC. in Perk. Frag. Fl. Philip. (1905) 153, Philip. Journ. Sci. 5 (1910) Bot. 434.

Jolo, (*Warburg 14844*). Endemic; very closely allied to *Piper betle* Linn.

PIPER BETLE Linn. Sp. Pl. (1753) 28; Blanco Fl. Filip. (1837) 22, ed. 2 (1845) 16, ed. 3, 1 (1877) 30, t. 12; F.-Vill. Novis. App. (1880) 175; C. DC. Prodr. 16¹ (1869) 359, Philip. Journ. Sci. 5 (1910) Bot. 431 (incl. formae *b, c*), 11 (1916) Bot. 216, Leaf. Philip. Bot. 3 (1910) 447; Merr. Fl. Manila (1912) 170, Sp. Blancoanae (1918) 119.

Piper canaliculatum Opiz in Presl Rel. Haenk. 1 (1828) 156.

Piper betle Linn. var. *densum* C. DC. Prodr. 16¹ (1869) 360.

Piper philippinense C. DC. Prodr. 16¹ (1869) 353; F.-Vill. Novis. App. (1880) 175; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 219.

Chavica betle Syst. Pip. (1843) 228; Miq. Fl. Ind. Bat. 1² (1858-59) 439.

Piper anisumolens Blanco Fl. Filip. (1837) 23.

Piper anisodorum Blanco Fl. Filip. ed. 2 (1845) 16, ed. 3, 1 (1877) 31, t. 362.

Piper siriboa Hassk. in Flora 47 (1864) 59 quoad syn. Blanco.

Piper blancoi Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 40.

Piper canaliculatum Opiz in Rel. Haenk. 1 (1828) 156; Miq. Syst. Pip. (1843) 336.

The betle pepper, cultivated throughout the Philippines, also wild in most provinces of Luzon (*P. philippinense* C. DC., *P. canaliculatum* Opiz). India to Malaya.

Local names: Buyo (Bik.); buyo-anis (Tag.); buyo-búyo (Bik.); buyog (Mbo.); buyok (C. Bis.); buyu (Sul.); gaóed (Pang.); gaúed (Ilk.); gaúod (It.); gók (Ibn.); ikmo (Tag.); íkmong-ilóko (Tag.); itmo (Tag.); kanisi (Bis.); mamin (Bis., Tag.); mamon (Bis.); samat (Pamp.).

PIPER BREVIAMENTUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 434.

Mindanao, *Williams 2104*. In forests, altitude about 150 m. Endemic.

PIPER BREVICUSPE (Miq.) comb. nov.

Rhyncholepis brevicusps Miq. Syst. Pip. (1843) 283, Nov. Act. Acad.

Nat. Cur. 19 (1843) Suppl. 1: 492, Fl. Ind. Bat. 1² (1858-59) 447.

Rhyncholepis cumingiana Miq. Syst. Pip. (1843) 282, non *Piper cumingiana* Miq.

Piper rhyncholepis C. DC. Prodr. 16¹ (1869) 344 (*rhyncholepsis*),

Philip. Journ. Sci. 5 (1910) Bot. 423, 11 (1916) Bot. 209; F.-Vill.

Novis. App. (1880) 176; Vidal Phan. Cuming. Philip. (1885) 138,

Rev. Pl. Vasc. Filip. (1886) 220.

Piper rhyncholepis C. DC. var. *brevicuspe* C. DC. Prodr. 16¹ (1869)

344, Philip. Journ. Sci. 5 (1910) Bot. 424; Vidal Phan. Cuming.

Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 220.

Samar, Leyte, Bohol, Mindanao, *Cuming 1697, 1843, Wenzel 21, 56, 733, B. S. 17409, 17563 Ramos, Merrill Phil. Pl. 1159, B. S. 37606, 36976 Ramos & Edaño*. In forests at low and medium altitudes. Endemic.

Local names: Talon-tálon (Sub.); tonyabáyan (Mbo.).

PIPER BREVISTIGMUM C. DC. in Leaf. Philip. Bot. 6 (1914) 2292.

Mindanao (Agusan), *Elmer 13684*. Endemic.

Local name: Ianáhon (Mbo.).

PIPER CABADBARANUM C. DC. in Leaf. Philip. Bot. 6 (1914) 2292.

Mindanao (Agusan), *Elmer 14136*. Endemic.

Local name: Bodunghay-as (Mbo.).

PIPER CACUMINUM C. DC. in Leaf. Philip. Bot. 3 (1910) 765, Philip. Journ. Sci. 5 (1910) Bot. 421.

Luzon (Bataan, Zambales), *Elmer 6890, F. B. 8076 Curran & Merritt*. In the mossy forests on higher mountains, altitude 1,100 to 1,500 m. Endemic.

PIPER CAGAYANENSE C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 435, 11 (1916) Bot. 217.

Luzon (Cagayan, Apayao), *B. S. 7484, 13838 Ramos, B. S. 28369, 28351 Fénix*. In forests at low altitudes. Endemic.

PIPER CALVIFOLIUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 217.

Luzon, (*Loher 6794 p. p.*). Endemic.

PIPER CANINUM Blume in Verh. Bat. Genoots. 11 (1826) 214; A. Dietr. Sp. Pl. 1 (1831) 681; Miq. Comm. Phyt. (1839) 17, 33, t. 3; C. DC. Prodr. 16¹ (1869) 341, Philip. Journ. Sci. 5 (1910) Bot. 458, 11 (1916) Bot. 224; F.-Vill. Novis. App. (1880) 175; Vidal Rev. Pl. Vasc. Filip. (1886) 219.

Piper densibaccum C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 454.

Piper parvipilum C. DC. op. cit. 445.

Northern Luzon to Mindanao and Palawan, *Merrill 7213, 9462, B. S. 14672, 14676, 14699, 24260, 17508, 39672 Ramos*. In forests at low and medium altitudes. Malay Peninsula to New Guinea.

Var. GLABRIBRACTEUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 459.

Mindanao, *Clemens 176*. In thickets or forests, altitude about 600 m.

Var. LANAENSE C. DC. l. c.

Mindanao, *Clemens*. In thickets or forests, altitude about 600 m.

Var. *LATIBRACTEUM* C. DC. in *Leaf. Philip. Bot.* 3 (1910) 787, *Philip. Journ. Sci.* 5 (1910) 459.

Luzon (Tayabas, Benguet), *Elmer* 7627, 7990, 8844. In forests, altitude 200 to 1,300 m.

Var. *SABLANUM* C. DC. in *Philip. Journ. Sci.* 5 (1910) Bot. 459.

Luzon (Benguet), Mindanao, *Elmer* 6150, 14008. In forests, altitude about 800 m.

The species extends from the Malay Peninsula to New Guinea, the varieties endemic.

Local names: Buyo-búyo (Bik.); buyobuyóg (C. Bis.); détid (Ig.); lauiṅgan (Sub.); tampádan (Mbo.).

PIPER CARNISTYLUM C. DC. in *Leaf. Philip. Bot.* 3 (1910) 774, *Philip. Journ. Sci.* 5 (1910) Bot. 432.

Luzon (Tayabas), (*Elmer* 9333). In forests along streams, altitude about 600 m. Endemic.

PIPER CATUBIGENSE Merr. in *Philip. Journ. Sci.* 17 (1920) 244.

Samar, *B. S.* 24278 Ramos. In damp forests at low altitudes. Endemic.

PIPER CELTIDIFORME Opiz in Presl *Rel. Haenk.* 1 (1828) 152, t. 26, f. 2; C. DC. *Prodr.* 16¹ (1869) 377; F.-Vill. *Novis. App.* (1880) 76.

Chavica celtidiformis Miq. *Syst. Pip.* (1843) 276.

Piper corylistachyon C. DC. *Prodr.* 16¹ (1869) 346 (incl. var. *magnifolia* C. DC.); F.-Vill. *Novis. App.* (1880) 175; Vidal Phan. Cuming. *Philip.* (1885) 138, *Rev. Pl. Vasc. Filip.* (1886) 219; C. DC. in *Philip. Journ. Sci.* 5 (1910) Bot. 438 (incl. formae *b*, *c*, *d*, *d2*), 11 (1916) 218, *Leaf. Philip. Bot.* 3 (1910) 776; Merr. *Sp. Blancoanae* (1918) 118.

Piper obliquum Blanco *Fl. Filip.* (1837) 22, ed. 2 (1845) 16, ed. 3, 1 (1877) 30, non Ruiz & Pav.

Chavica corylistachya Miq. *Syst. Pip.* (1843) 281, *Fl. Ind. Bat.* 1¹ (1858-59) 447.

Piper warburgii C. DC. in Perk. *Frag. Fl. Philip.* (1905) 159.

Piper usterii C. DC. in *Vierteljahrsschr. Naturf. Ges. Zürich* 50 (1905) 447 [*Usteri* Beitr. Ken. *Philip. Veg.* (1905) 125]; Fedde *Repert.* 5 (1908) 64.

Piper usterii C. DC. var. *plurifistulosum* C. DC. l. c.; Fedde l. c.

Piper luzonense C. DC. *Prodr.* 16¹ (1869) 350; F.-Vill. *Novis. App.* (1880) 175.

Piper reinwardtianum C. DC. in *Philip. Journ. Sci.* 11 (1916) Bot. 218, non C. DC. *Prodr.* 16¹ (1869).

Throughout the Philippines at low and medium altitudes in thickets and forests. Endemic.

Local names: Baligágod (Neg.); buyo-bóyo (Bis.); harás (Bis.); litlít (Tag.); litlít-anák (Pamp.); litlít-anító (Tag.); litlít-báboy (Tag.); litlít-matsing (Tag.); manikatápai (Bag.); nopau (Bik.); samát-áhas (Tag.); sañṅilo (Bis.); saog (Bis.); sumpat (Sub.); talon-tálon (Sub.).

PIPER CLEMENSIAE C. DC. in *Philip. Journ. Sci.* 5 (1910) Bot. 449.

Mindanao (Lanao), *Clemens* 1200. In forests, altitude about 600 m. Endemic.

PIPER COSTULATUM C. DC. Leaf. Philip. Bot. 3 (1910) 764, Philip. Journ. Sci. 5 (1910) Bot. 420, 11 (1916) Bot. 208.

Luzon (Nueva Ecija, Nueva Vizcaya, Bataan, Tayabas), Panay, Mindanao (Agusan). In forests at higher altitudes. Endemic.

Local names: Pagítan (Mbo.); sobo-manók (Tag.).

PIPER CRASSILIMBUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 210.

Luzon (Benguet), *Merrill 7660, 7649*. In thickets, altitude about 1,500 m. Endemic.

PIPER CRASSINODUM C. DC. Leaf. Philip. Bot. 3 (1910) 780, Philip. Journ. Sci. 5 (1910) Bot. 445.

Luzon (Tayabas, Laguna), *Elmer 8042, B. S. 28723 Ramos & Edaño, B. S. 27972 Ocampo*. In forests, altitude about 1,000 m. Doubtfully distinct from *Piper allenii* C. DC. Endemic.

PIPER CRISTATUM C. DC. Leaf. Philip. Bot. 3 (1910) 770, Philip. Journ. Sci. 5 (1910) Bot. 428.

Leyte, Mindanao (Davao), *Elmer 10703, Wenzel 638, 1130*. In forests, altitude 500 to 1,000 m. Endemic.

Local names: Busok-búsok (Bag.); buyok-búyok (C. Bis.).

PIPER CURTIFOLIUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 421.

Luzon (Abra, Bontoc), *B. S. 7107 Ramos, 37844 Ramos & Edaño*. In the mossy forest, altitude about 1,800 m. Endemic.

PIPER DAGAMIENSE C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 211.

Luzon (Tayabas), Panay, Leyte, Samar, *B. S. 15181, 24186, 24331, 24550 Ramos, B. S. 28591, 31349, 31425 Ramos & Edaño, 32493 McGregor*. In damp forests at low and medium altitudes. Endemic.

Local name: Buyat-halo (P. Bis.).

PIPER DAGATPANUM C. DC. in Perk. Frag. Fl. Philip. (1905) 154, Philip. Journ. Sci. 5 (1910) Bot. 455.

Mindanao (Davao), (*Warburg 14739, 14738*). Probably from forests at medium altitudes. Endemic.

PIPER DAVAOENSE C. DC. in Perk. Frag. Fl. Philip. (1905) 154, Leaf. Philip. Bot. 3 (1910) 785, Philip. Journ. Sci. 5 (1910) Bot. 453.

Mindanao (Davao, Agusan), (*Warburg 14740, 14745*), *Elmer 13582, 11065*. In bamboo thickets, altitude about 750 m. Endemic. Perhaps not distinct from *Piper interruptum* Opiz.

Local names: Bitung-tuñgon (Mbo.); manikatápai (Bag.).

PIPER DECUMANUM Linn. in Stickman Herb. Amb. (1754) 19, Amoen. Acad. 4 (1759) 128, Sp. Pl. ed. 2 (1762) 41; Merr. Interpret. Herb. Amb. (1917) 181.

Sirium decumanum Rumph. Herb. Amb. 5: 45, t. 27!

Piper forstenii C. DC. Prodr. 16¹ (1869) 348, Leaf. Philip. Bot. 3 (1910) 768, Philip. Journ. Sci. 5 (1910) Bot. 424.

Mindanao (Agusan, Bukidnon, Davao, Lanao), *Clemens 572, B. S. 13667 Fénix, Elmer 13296, 11179*. In forests at medium altitudes. Moluccas.

Local names: Barágit (Bag.); búyog (Mbo.); malapágba (Buk.).

PIPER DELICATUM C. DC. in Leaflet. Philip. Bot. 3 (1910) 778, Philip. Journ. Sci. 5 (1910) Bot. 444, 11 (1916) Bot. 219 (incl. forma *b*).

Luzon (Ilocos Norte, Lepanto, Benguet, Bontoc, Ifugao, Camarines), Mindanao, Agusan. In forests on the higher mountains. Endemic.

Local names: Maniniak (Ig.); tamasaon (Mbo.); umum (Ig.).

Var. **GLABRUM** C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 444.

Luzon (Benguet, Lepanto). In the mossy forest on the higher mountains.

PIPER DENUDATUM Opiz in Presl Rel. Haenk. 1 (1828) 158; C. DC. Prodr. 16¹ (1869) 377, Philip. Journ. Sci. 5 (1910) Bot. 444; F.-Vill. Novis. App. (1880) 176.

Rhyncholepis haenkeana Miq. Syst. Pip. (1843) 284, Fl. Ind. Bat. 1² (1858-59) 448.

Piper albidirameum C. DC. in Perk. Frag. Fl. Philip. (1905) 153, Leaflet. Philip. Bot. 3 (1910) 771, Philip. Journ. Sci. 5 (1910) Bot. 428 (incl. formae *b*, *c*, *d*), 11 (1916) Bot. 213.

Piper fuscuscentirameum C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 217.

Piper magnasanum C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 429.

Piper psilocarpum C. DC. Philip. Journ. Sci. 11 (1916) Bot. 215.

Piper lividum C. DC. in Perk. Frag. Fl. Philip. (1905) 155, Philip. Journ. Sci. 5 (1910) Bot. 462.

Piper pendulifolium C. DC. in Leaflet. Philip. Bot. 3 (1910) 772, Philip. Journ. Sci. 5 (1910) Bot. 429.

Northern Luzon to Mindanao, in forests at low and medium altitudes. Having examined the types or cotypes of all the synonyms above cited, I can see no reason for distinguishing more than one species. Endemic.

Local names: Boyóg (Mbo.); gauéd (Ibn.); guti-guti (Neg.); kañgal (Bag.); lakbaugan (Mbo.); lauiñgan (Buk.); litlit (Mbo.); makago (Mbo.); manikatápai (Bag.); maragum (Neg.); muyo-búyo (Bik.).

PIPER DIPTEROCARPINUM C. CD. in Philip. Journ. Sci. 5 (1910) Bot. 455.

Mindanao (Zamboanga), *F. B. 9146 Whitford & Hutchinson*. In forests at low altitudes. Endemic. Probably a form of *Piper caninum* Blume.

PIPER ELLIPTICIBACCUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 449.

Luzon (Ilocos Norte, Camarines), Catanduanes, *B. S. 6344 Robinson, 30385, 33180, 33025 Ramos*. In forests at low altitudes. Endemic. Very close to *Piper interruptum* Opiz.

PIPER ELMERI Merr. in Philip. Journ. Sci. 17 (1920) 245.

Luzon (Laguna, Sorsogon), Samar, *B. S. 24256, 23490 Ramos, F. B. 26751 Mabesa, Elmer 18059*. In primary forests at low and medium altitudes. Endemic.

PIPER EUPODUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 219.

Leyte, *B. S. 15227 Ramos, Wenzel 1005*. In forests, altitude about 500 m. Endemic.

PIPER FENIXII C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 425.

Batan Islands (Batan), *B. S. 3652 Fénix*. In thickets at low altitudes. Endemic. Apparently very close to *Piper betle* Linn.

Local name: Samój (Iv.).

PIPER FIRMOLIMBUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 435.

Leyte, Mindanao (Lanao), *Clemens, Wenzel 1622*. In forests, altitude about 600 m. Endemic.

PIPER FRAGILE Benth. in Hook. Lond. Journ. Bot. 2 (1843) 234, var. **MULTINERVE** C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 421, 11 (1916) Bot. 208.

Luzon (Tayabas, Camarines), Bucas, *Merrill 3366, 5271, B. S. 19426 Ramos*. On rocks near the sea, in thickets, and in forests at low altitudes. The species in New Guinea, the variety endemic.

Local name: Litlit-aníto (Tag.).

PIPER GLABRISPICUM C. DC. in Perk. Frag. Fl. Philip. (1905) 155, Philip. Journ. Sci. 5 (1910) Bot. 451.

Mindanao (Davao), (*Warburg 14748*). Endemic. Perhaps a form of *Piper nigrum* Linn.

PIPER HAENKEANUM Opiz in Presl Rel. Haenk. 1 (1828) 159; C. DC. Prodr. 16¹ (1869) 377, Philip. Journ. Sci. 5 (1910) Bot. 462; F.-Vill. Novis. App. (1880) 176.

Piper hirsutissimum Miq. Syst. Pip. (1843) 336.

Luzon (Sorsogon), *Haenke*. An endemic species of doubtful status, perhaps the same as *P. merrittii* C. DC.

PIPER HALCONENSE C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 422.

Mindoro (Mt. Halcon), *Merrill 5773, F. B. 4393 Merritt, B. S. 40571, 40607, 40725, 40729 Ramos & Edaña*. In forests, altitude about 1,500 m. Endemic.

PIPER HALLIERI C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 458.

Basilan, *Hallier*. Endemic. Perhaps merely a form of *Piper caninum* Blume.

PIPER INTERRUPTUM Opiz in Presl Rel. Haenk. 1 (1828) 157; Miq. Syst. Pip. (1843) 336; C. DC. Prodr. 16¹ (1869) 377, Philip. Journ. Sci. 5 (1910) Bot. 448 (incl. forma *b*), 11 (1916) Bot. 222 (incl. forma *c*); F.-Vill. Novis. App. (1880) 176.

Piper cumingianum Miq. Syst. Pip. (1843) 329, Fl. Ind. Bat. 1¹ (1858-59) 454; C. DC. Prodr. 16¹ (1869) 366; F.-Vill. Novis. App. (1880) 176; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 219.

Northern Luzon to Mindanao. In forests, mostly at medium altitudes. Endemic.

Var. **HERBACEUM** C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 448.

Luzon (Bataan), *Merrill 3182*. On exposed ridges, altitude about 1,150 m.

Var. **MULTIPLINERVE** C. DC. in Leaf. Philip. Bot. 3 (1910) 785, Philip. Journ. Sci. 5 (1910) Bot. 448.

Luzon (Benguet, Tayabas, Rizal, Bataan), *Elmer 7691, B. S. 1019 Ramos, F. B. 15865 Baconi*. In forests at medium altitudes.

- Var. **SUBARBORESCENS** C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 448.
Piper subarborescens C. DC. op. cit. 11 (1916) Bot. 222.
 Luzon (Rizal), *B. S.* 4585 Ramos. In forests. The species and all varieties endemic.
 Local names: Ikmong-uák (Tag.); kadákad (Ilk.); kadákad-kalaat (Ilk.); kalaskás (Tag.); litlit (Tag.); litlit-áso (Tag.); nanankáling (Mbo.); pamipamintáhan (Tag.).
- PIPER JAGORI** C. DC. Prodr. 16¹ (1859) 358 (*jayeri*, sphalm), Philip. Journ. Sci. 5 (1910) Bot. 437; F.-Vill. Novis. App. (1880) 175.
 Luzon, (*Jagor* in herb. Berol.). Probably from forests at low altitudes. Endemic.
- PIPER KORTHALSII** Miq. Ann. Mus. Bot. Lugd.-Bat. 1 (1863) 139; C. DC. Prodr. 16¹ (1869) 365, Philip. Journ. Sci. 5 (1910) Bot. 414, Leaflet. Philip. Bot. 3 (1910) 763.
 Northern Luzon to Mindanao, *Merrill* 7805, 5592, *Phil. Pl.* 471, *Elmer* 13726, 5896, 5905. In forests, medium to higher altitudes.
- Var. **LONGIBRACTEUM** C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 414.
 Mindanao (Lanao), *Clemens* 463. In forests, altitude about 600 m. Sumatra (the species), the variety endemic.
 Local names: Dagóg (Mbo.); dauód (Ig.); tápi (Ig.).
- PIPER LAEVIRAMEUM** C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 450.
 Mindanao (Lanao, Surigao), *Clemens* 1255, *B. S.* 34428, 34544 Ramos & Pascasio. In forests at low and medium altitudes. Endemic.
- PIPER LAGENIOVARIVM** C. DC. in Leaflet. Philip. Bot. 3 (1910) 767, Philip. Journ. Sci. 5 (1910) Bot. 424.
 Mindanao (Davao), *Elmer* 10589. In thickets and forests. Endemic.
 Local name: Kúyo (Bag.).
- PIPER LANGLASSEI** C. DC. in Ann. Conserv. Jard. Bot. Genève 2 (1898) 273, Philip. Journ. Sci. 5 (1910) Bot. 433.
 Luzon (Laguna, Mt. Banahao), (*Langlassé*). Endemic.
- PIPER LAXIRAMEUM** C. DC. Leaflet. Philip. Bot. 3 (1910) 779, Philip. Journ. Sci. 5 (1910) Bot. 443.
 Mindanao (Davao), *Elmer* 10503. In forests, altitude about 1,200 m. Endemic.
 Local name: Manikatápai (Bag.).
- PIPER LESSERTIANUM** (Miq.) C. DC. in Journ. Bot. 4 (1866) 164, non C. DC. Prodr. 16¹ (1869) 258.
Chavica lessertiana Miq. Syst. Pip. (1843) 270, Miq. Fl. Ind. Bat. 1² (1858-59) 445.
Piper pseudochavica C. DC. Prodr. 16¹ (1869) 351, Leaflet. Philip. Bot. 3 (1910) 769, Philip. Journ. Sci. 5 (1910) Bot. 427, 11 (1916) Bot. 212; F.-Vill. Novis. App. (1880) 175; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 219.
 Luzon to Mindanao, *Cuming* 1343, *B. S.* 28226 *Fénix*, 24527 Ramos, 31372, 28507, 28688, 38688 Ramos & Edaña, *Clemens* 574, *Elmer* 11417. In forests at medium altitudes. Endemic.
 Local names: Manikatápai (Bag.); tugpoái (Buk.).

PIPER LOHERI C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 450, 11 (1916) Bot. 223 (incl. forma *c*); Merr. Fl. Manila (1912) 171.

Northern to central Luzon, *B. S. 12217 Ramos, 11840 Robinson, Merrill 5039, Phil. Pl. 269*. In thickets and forests at low and medium altitudes.

Forma **MULTIPLINERVE** C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 450, 11 (1916) Bot. 223.

Luzon (Bataan, Laguna), *B. S. 6015 Robinson, 1870, 12242 Foxworthy*. An endemic species. Closely allied to *Piper interruptum* Opiz.

Local names: Litlít (Tag.); litlít-cauáyan (Tag.); maragaued (Ilk.); pamintá (Tag.); pamipamintahan (Tag.); piméntan (Tag.); samát-uák (Pamp.).

PIPER LONGILIMBUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 221.

Samar, *B. S. 24307, 17602 Ramos*. In forests at low altitudes. Endemic. Local name: Parong-dagkó (S. L. Bis.).

PIPER LONGISTIGMUM C. DC. in Leaf. Philip. Bot. 3 (1910) 770, Philip. Journ. Sci. 5 (1910) Bot. 428.

Luzon (Tayabas, Mt. Banahao), *Elmer 7578*. Endemic.

PIPER LONGUM Linn. Sp. Pl. (1753) 29; C. DC. Prodr. 16¹ (1869) 355, Philip. Journ. Sci. 5 (1910) Bot. 423; F.-Vill. Novis. App. (1880) 175.

Philippines, unknown collector, fide *C. de Candolle*, l. c. India to Malaya.

PIPER LUCBANENSE C. DC. in Leaf. Philip. Bot. 6 (1914) 2293.

Luzon (Tayabas, Mt. Banahao), (*Elmer 7383*). Endemic.

PIPER MACGREGORII C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 215.

Biliran, Catanduanes, *B. S. 18491, 18991 McGregor, 30493 Ramos*. In forests, altitude about 300 m. Endemic.

PIPER MAGALLANESANUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 212.

Sibuyan, *Elmer 12313 p. p.* Endemic. Allied to *Piper longivagins* C. DC.

PIPER MALALAGANUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 461.

Mindanao (Davao), *Copeland 696*. In thickets at low altitudes. An endemic species very close to *Piper caninum* Blume.

PIPER MALARAYATENSE C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 442.

Luzon (Batangas), *Copeland*. Endemic.

PIPER MALINDANGENSE C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 436.

Mindanao (Misamis), *F. B. 4758 Mearns & Hutchinson*. In forests. Endemic.

PIPER MARIVELESANUM C. DC. in Perk. Frag. Fl. Philip. (1905) 155, Leaf. Philip. Bot. 3 (1910) 787, Philip. Journ. Sci. 5 (1910) Bot. 457, 11 (1916) Bot. 224.

Central Luzon to Mindanao, in thickets and forests at low and medium altitudes. Endemic. Perhaps merely a form or variety of *Piper caninum* Blume.

Local names: Buyók-hálo (P. Bis.); litlít-matsing (Tag.); súbong-manók (Tag.); súbu-manók (Tag.); tubóg-manók (Tag.).

PIPER MEARNsii C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 447.

Luzon (Tayabas, east coast), *B. S.* 2987 Mearns, 28710 Ramos & Edaño. In forests at low altitudes. Endemic.

PIPER MERRILLii C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 426, 11 (1916) Bot. 212.

Luzon (Laguna), Mindoro, Palawan, Negros, Samar, Merrill 1809, 9505, 7033, McGregor 178, *B. S.* 20557, 39431 Ramos, 40575, 40695, 40709, 40719, 40720 Ramos & Edaño. In damp forests at low altitudes. Endemic.

Local name: Parong (Bis.).

PIPER MERRITTii C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 460, 11 (1916) Bot. 224 (incl. var. *parvifolium* C. DC. l. c.).

Central Luzon to Mindanao, *B. S.* 31423, 26610 Ramos & Edaño, 24933, 16537 Ramos, 22828 McGregor, Wenzel 1173, 1095, 502, 309, Elmer 10581. In damp forests at low and medium altitudes. Endemic.

Local name: Manikatapai (Bag.).

PIPER MINDORENSE C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 423.

Mindoro, Panay, *F. B.* 4474 Merritt, *B. S.* 30691, 30660, 30664, 30663 Ramos & Edaño. In damp forests at medium altitudes. Endemic.

PIPER MULTISTIGMUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 222.

Luzon (Bontoc, Ifugao), *B. S.* 19819 McGregor, 37665, 37987 Ramos & Edaño. In forests, altitude about 1,000 m. An endemic species very close to *Piper interruptum* Opiz.

PIPER MYRMECOPHILUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 211.

Leyte, Samar, *B. S.* 17599, 24366, 24345, 24346 Ramos, Wenzel 1464, 1778. In damp forests at low altitudes. Endemic.

PIPER NIGRUM Linn. Sp. Pl. (1753) 28; Presl Epim. (1851) 224; Blanco Fl. Filip. (1837) 21, ed. 2 (1845) 16, ed. 3, 1 (1877) 29, t. 11; Miq. Fl. Ind. Bat. 1² (1858-59) 451; F.-Vill. Novis. App. (1880) 175; C. DC. Prodr. 16¹ (1869) 363, Philip. Journ. Sci. 5 (1910) Bot. 452; Merr. Sp. Blancoanae (1918) 118.

Piper laxum Vahl Enum. 1 (1804) 326; F.-Vill. Novis. App. (1880) 176.

Philippines, fide Vahl l. c.; probably the specimen cited represents the next variety.

Var. **TRIOICUM** C. DC. Prodr. 16¹ (1869) 363, Philip. Journ. Sci. 5 (1910) Bot. 452.

Luzon (Cavite, Batangas), *B. S.* 1339 Mangubat, Merrill Sp. Blancoanae 585, cultivated only. Black and white pepper.

Local names: Malisa (Tag.); pimienta (Sp.).

Var. **GLABRISPICUM** C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 223.

Mindanao (Surigao), Weber. The black pepper plant of commerce; widely distributed in the Malayan region in cultivation.

PIPER OBLONGIBACCUM C. DC. in Leaf. Philip. Bot. 3 (1910) Bot. 777, Philip. Journ. Sci. 5 (1910) Bot. 441.

Negros, *Elmer 9456*. In forests, altitude about 1,200 m. Endemic.
Local name: Buyok-búyok (C. Bis.).

PIPER OBOVATIBRACTEUM C. DC. in Leaf. Philip. Bot. 3 (1910) 784, Philip. Journ. Sci. 5 (1910) Bot. 447, 11 (1916) Bot. 221.

Central Luzon to Mindanao. In forests at medium altitudes. Endemic.
Local name: Dumadiñgan (Lan.).

PIPER OVATIBACCUM C. DC. in Leaf. Philip. Bot. 3 (1910) 782, Philip. Journ. Sci. 5 (1910) Bot. 445, 11 (1916) Bot. 220.

Piper robinsonii C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 445.

Central Luzon to Mindanao, in forests at medium altitudes. Endemic.

Local names: Búyo-háyo (P. Bis.); diltít (Ig.); litlít (Tag.); litlít-matsíng (Tag.); mapoua (Buk.).

PIPER PALAWANUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 210.

Palawan, *B. S. 15573 Fénix*. On trees along the seashore. Endemic.

PIPER PARCIRAMEUM C. DC. in Leaf. Philip. Bot. 3 (1910) 781, Philip. Journ. Sci. 5 (1910) Bot. 445.

Mindanao (Davao), *Elmer 11274, 10899*. In forests, altitude about 900 m. Endemic.

Local names: Poruan (Bag.); salimbáñgon (Bag.).

PIPER PAUCINERVE C. DC. in Perk. Frag. Fl. Philip. (1905) 156, Philip. Journ. Sci. 5 (1910) Bot. 456.

Luzon (Isabela), (*Warburg 11929*). Endemic.

PIPER PENNINERVE C. DC. in Perk. Frag. Fl. Philip. (1905) 157, Philip. Journ. Sci. 5 (1910) Bot. 440, 11 (1916) Bot. 218.

Luzon to Mindanao, *B. S. 13857 Ramos & Edaño, 23557 Ramos, 15230, 24284, 28392 Fénix, 11818 Robinson, Wenzel 2, 374, 719*. In forests at medium altitudes. Endemic.

PIPER PETRAEUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 430.

Luzon (Benguet), *Elmer 6430, Sandkuhl 158*. In thickets. Endemic.

PIPER PHILIPPINUM Miq. Syst. Pip. (1843) 322, Fl. Ind. Bat. 1^a (1858-59) 453; C. DC. Prodr. 16¹ (1869) 348, Philip. Journ. Sci. 5 (1910) Bot. 437; F.-Vill. Novis. App. (1880) 175; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 219.

Luzon (Rizal, Tayabas, Albay), Samar, Leyte, *Cuming 912, B. S. 24184, 26205 Ramos, 29127, 29131 Ramos & Edaño*. In forests at medium altitudes. Endemic.

PIPER PERPUNCTATUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 219.

Palawan, *Merrill 7246*. In forests at low altitudes. Closely allied to *Piper caninum* Blume. Endemic.

PIPER PILISPICUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 452.

Luzon (Ilocos Norte, Benguet), *B. S. 5720 Ramos, F. B. 12484 Merritt & Darling*. Endemic.

PIPER PODANDRUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 436, 11 (1916) Bot. 217.

Luzon (Zambales), Catanduanes, *B. S. 5053, 30495 Ramos, F. B. 8141 Curran & Merritt*. In forests. Endemic.

PIPER POLISANUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 209.

Luzon (Ilocos Norte, Bontoc, Apayao, Ifugao), *B. S.* 19817, 19816 *McGregor*, 33363 *Ramos*, 10755 *Worcester*, 38069 *Ramos & Edaño*. In forests, altitude about 1,200 m. Endemic.

PIPER POLYCLADUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 438, 11 (1916) Bot. 218.

Luzon (Benguet, Rizal), *Williams* 1134, *B. S.* 13396 *Ramos*, *Merrill Phil. Pl.* 751. In thickets and forests, altitude about 1,200 m. Endemic.

PIPER PUBERULINODUM C. DC. in Leaf. Philip. Bot. 3 (1910) 773, Philip. Journ. Sci. 5 (1910) Bot. 429.

Mindanao (Davao), *Elmer* 11972. In forests, altitude about 800 m. Endemic.

PIPER PULOGENSE C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 453, 11 (1916) Bot. 222.

Luzon (Benguet), *Merrill Phil. Pl.* 749, *F. B.* 16240 *Curran*, *Merritt*, & *Zschokke*. In forests, altitude about 2,200 m. Endemic.

PIPER RAMOSII C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 426, 11 (1916) Bot. 211.

Luzon (Rizal), Panay, Mindanao, *B. S.* 1755, 18433, 18397, 24932, 22279 *Ramos*, 19149 *Reillo*, 15788 *Fénix*, 31218, 29645, 29730 *Ramos & Edaño*. In forests, altitude about 1,200 m. Endemic.

Local names: Litlít (Tag.); tugpuán (Buk.).

PIPER RETROFRACTUM Vahl Enum. 1 (1804) 314; *Usteri* Beitr. Ken. Philip. Veg. (1905) 125, C. DC. in Perk. Frag. Fl. Philip. (1905) 157 (incl. var. *latifolium* C. DC.), Philip. Journ. Sci. 5 (1910) Bot. 439, 11 (1916) Bot. 218, Leaf. Philip. Bot. 3 (1910) 776; *Merr.* Fl. Manila (1912) 170, Sp. Blancoanae (1918) 118.

Piper parvifolium Blanco Fl. Filip. (1837) 23, ed. 2 (1845) 17, ed. 3, 1 (1877) 32; C. DC. Prodr. 16¹ (1869) 376.

Chavica parvifolia Hassk. in Flora 47 (1864) 59.

Piper officinarum C. DC. Prodr. 16¹ (1869) 356; F.-Vill. Novis. App. (1880) 176; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 219.

Chavica officinarum Miq. Syst. Pip. (1843) 256, Nov. Act. Acad. Nat. Cur. 21 (1846) Suppl. 39, t. 34, Fl. Ind. Bat. 1² (1858-59) 444.

Batan Islands, Luzon, Mindanao, Panay, Palawan. In thickets at low altitudes, usually common. Indo-China and the Malay Peninsula to the Moluccas.

Local names: Amáras (Ilk.); boyo-bóyo (Tagb.); kamára (Ilk.); ka-yuñgo (Tag.); lilít (Ilk.); litlít (Tag.); sabía (Tag.); salimára (Tag.); soag-matsíng (Tag.); súbon-manók (Tag.).

PIPER RHOMBOPHYLLUM C. DC. Prodr. 16¹ (1869) 352, Leaf. Philip. Bot. 3 (1910) 775, Philip. Journ. Sci. 5 (1910) Bot. 433, 11 (1916) Bot. 216; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 220.

Chavica populifolia Miq. Syst. Pip. (1843) 248, Fl. Ind. Bat. 1² (1858-59) 442, non *Piper populifolia* Opiz.

Piper rhombifolium F.-Vill. Novis. App. (1880) 175, sphalm.

Piper sarcostylum C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 216.

Piper copelandii C. DC. in op. cit. 5 (1910) Bot. 447.

Southern Luzon to Mindanao, *Cuming 834, B. S. 13282, 17507, 22150 Ramos, Copeland 1298, Merrill 7305*. In forests at low altitudes. Endemic. Allied to *Piper abbreviatum* Opiz.

Local name: Guti-guti (Bik.).

PIPER ROTUNDISTIGMUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 425, 11 (1916) Bot. 209.

Piper leyteanum C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 220.

Southern Luzon, Leyte, Biliran, Samar, Mindanao, *Wenzel 505, 214, 463, 657, 1819, B. S. 15247, 15379, 17653, 23405 Ramos, 18882 McGregor, Elmer 13521, Clemens*. In forests at low and medium altitudes.

Var. **PILOSIUS** C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 209.

Samar, *B. S. 17434, 17653 Ramos*. Endemic.

Local name: Ihaláson (Mbo.).

PIPER RUFINERVE Opiz in Presl Rel. Haenk. 1 (1828) 159; Miq. Syst.

Pip. (1843) 336; C. DC. Prodr. 16¹ (1869) 377; F.-Vill. Novis.

App. (1880) 176; C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 462.

Luzon, *Haenke*. A species of doubtful status, known only from the original description.

PIPER SAMARANUM C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 223.

Samar, Leyte, *B. S. 17546 Ramos, Wenzel 1544*. In forests at low altitudes. Endemic.

PIPER SARMENTOSUM Roxb. Fl. Ind. 1 (1820) 162; C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 424, 11 (1916) Bot. 218.

Piper siassiense C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 443.

Southern Luzon, Negros, Palawan, Mindanao, Sulu Archipelago, *Merrill 6729, 9480, 5311, Elmer 14245, Wenzel 1882*. In thickets, coconut groves, etc., at low altitudes. India to southern China, southward to the Moluccas.

Local name: Patai-butu (Sul.).

PIPER SIBULANUM C. DC. in Perk. Frag. Fl. Philip. (1905) 158, Philip. Journ. Sci. 5 (1910) Bot. 442.

Mindanao (Davao), (*Warburg 14742*). In forests at low altitudes. Endemic.

PIPER STRIATUM C. DC. in Leaf. Philip. Bot. 3 (1910) 776, Philip. Journ. Sci. 5 (1910) Bot. 441.

Mindanao (Davao), *Elmer 11764*. In forests, altitude about 900 m. Endemic.

Local name: Miaukau (Bag.).

PIPER SUBPROSTRATUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 425.

Mindoro, *F. B. 6751 Merritt, B. S. 40726 Ramos & Edaño*. In forests at low altitudes. Endemic.

PIPER TAUMANUM C. DC. in Perk. Frag. Fl. Philip. (1905) 159, Philip. Journ. Sci. 5 (1910) Bot. 462.

Mindanao (Davao), (*Warburg 14741*). A species of doubtful status, described from a sterile specimen. Endemic.

PIPER TENUIPEDUNCULUM C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 460.

Mindanao (Zamboanga), *Williams 2374 p. p.* In forests at low altitudes, closely allied to *Piper caninum* Blume. Endemic.

PIPER TENUIRAMEUM C. DC. in Perk. Frag. Fl. Philip. (1905) 159, Philip. Journ. Sci. 5 (1910) Bot. 456.

Luzon (Rizal), (*Warburg 13317*). Perhaps not distinct from *Piper viminale* Opiz. Endemic.

PIPER TOPPINGII C. DC. in Leaf. Philip. Bot. 3 (1910) Bot. 783, Philip. Journ. Sci. 5 (1910) Bot. 446, 11 (1916) Bot. 221.

Piper chlorocarpum C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 221.

Piper pilipes C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 423, 11 (1916) Bot. 209.

Central Luzon to Mindanao, *Merrill 7770, 6530, Phil. Pl. 274, Elmer 5850, Clemens, B. S. 20129 McGregor, 15364 Ramos, 37650, 37790, 37902 Ramos & Edaña, Wenzel 20, 717, 773, 894, 889, 893, 948*. In forests at medium altitudes. Endemic.

Local name: Dauút (Ig.).

PIPER UMBELLATUM Linn. Sp. Pl. (1753) 43, var. **SUBPELTATUM** (Willd.) C. DC. in Donn.-Sm. Enum. 6: 39, Philip. Journ. Sci. 5 (1910) Bot. 463, 11 (1916) Bot. 225.

Piper subpeltatum Willd. Sp. Pl. 1 (1798) 166; C. DC. Prodr. 16¹ (1869) 333; F.-Vill. Novis. App. (1880) 176; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 220.

Piper peltatum Usteri Beitr. Ken. Philip. Veg. (1905) 125 (sphalm) non Linn.

Pothomorphe subpeltata Miq. Comment. Phytogr. (1840) 36, Syst. Pip. (1843) 213.

Northern Luzon to Mindanao. In damp forests at low and medium altitudes. Pantropic.

Local names: Balai (Bon.); bayag-bayág (C. Bis.); dujáran (Ig.); gumba (Sul.); kamámba (Tag.); kubámba (Tag.); kúyo (Bag.); kúyok (Bag.); pugápong (Buk.).

Var. **GLABRUM** C. DC. in Bull. Herb. Boiss. 6 (1898) 494, Leaf. Philip. Bot. 3 (1910) 789, Philip. Journ. Sci. 11 (1916) Bot. 225.

Luzon (Laguna), *B. S. 12414 McGregor*. In forests.

PIPER URDANETANUM C. DC. in Leaf. Philip. Bot. 6 (1914) 2293.

Mindanao (Agusan), *Elmer 13713*. Very closely allied to *Piper wenzellii* C. DC. Endemic.

Local name: Sauodan (Mbo.).

PIPER VARIBRACTEUM C. DC. in Leaf. Philip. Bot. 3 (1910) 764, Philip. Journ. Sci. 5 (1910) 421, 11 (1916) Bot. 208.

Mindanao (Davao), *Elmer 11998*. In forests at low altitudes. Endemic.

Local name: Manikatápai (Bag.).

PIPER VILLILIMBUM C. DC. in Leaf. Philip. Bot. 3 (1910) 788, Philip. Journ. Sci. 5 (1910) Bot. 461, 11 (1916) Bot. 224.

Northern Luzon to Mindanao, *B. S.* 23309, 23544, 20594, 13895, 14472, 22023 Ramos, Wenzel 372, 414, 427, 730, 916, 1660, 1791, 1734, 1879, Elmer 18605, Merrill 1783. In forests at low and medium altitudes. Endemic.

Local name: Mandásai (Mbo.).

PIPER VILLIRHACHE C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 214.

Mindanao (Agusan, Zamboanga, Bukidnon), Merrill 7280, *B. S.* 15773 Fénix, 36989, 36853, 36889 Ramos & Edaño. In forests at low altitudes. Endemic.

Local name: Tugpuán (Buk.).

PIPER VIMINALE Opiz in Presl Rel. Haenk. 1 (1828) 150, t. 26, f. 1; Miq. Syst. Pip. (1843) 336; C. DC. Prodr. 16¹ (1869) 361, Philip. Journ. Sci. 5 (1910) 436, 11 (1916) Bot. 217; F.-Vill. Novis. App. (1880) 176.

Chavica viminalis Miq. in Linnaea 20 (1847) 131, Fl. Ind. Bat. 1² (1858-59) 445.

Piper negrosense C. DC. in Leaf. Philip. Bot. 3 (1910) 786, Philip. Journ. Sci. 5 (1910) Bot. 454.

Northern Luzon to Mindanao, *B. S.* 20408, 14685, 30513, 30560 Ramos, 33690, 34036, 34033, 28746, 29194, 31131 Ramos & Edaño, Warburg 12126. In forests at low and medium altitudes. Endemic.

Local name: Lauināgan (Sub.).

PIPER WENZELII C. DC. in Philip. Journ. Sci. 11 (1916) Bot. 213.

Piper hirtirhache C. DC. l. c.

Leyte, Samar, Wenzel 628, 723, 779, 819, 891, 1168, 1197, 1543, *B. S.* 17587, 24290, 24285 Ramos. In forests, altitude about 500 m. Endemic.

PIPER ZAMBOANGÆ C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 424.

Piper oophyllum C. DC. op. cit. 430.

Piper williamsii C. DC. op. cit. 441.

Mindanao (Zamboanga, Davao, Bukidnon), Copeland 320, 333, *B. S.* 15773 Fénix, 36987 Ramos & Edaño, De Vore & Hoover 233, Williams 2750. In thickets, coconut groves, etc., at low altitudes. Endemic.

Local name: Lauināgan (Sub.).

DOUBTFUL AND EXCLUDED SPECIES

PIPER AMBOINENSE C. DC.; F.-Vill. Novis. App. (1880) 175.

PIPER ARCUATUM Blume; F.-Vill. Novis. App. (1880) 175.

PIPER ATTENUATUM Miq.; F.-Vill. Novis. App. (1880) 176.

PIPER GUAHAMENSE C. DC.; F.-Vill. Novis. App. (1880) 176.

PIPER MARGINATUM Jacq.; F.-Vill. Novis. App. (1880) 176.

PIPER MIQUELIANUM F.-Vill. Novis. App. (1880) 176.

PIPER POTAMOGETONIFOLIUM Opiz; F.-Vill. Novis. App. (1880) 176.

The above seven species were erroneously credited to the Philippines by F.-Villar; none of them have been found in the Archipelago.

PIPER CALLOSUM Ruiz & Pavon; Presl Rel. Haenk. 1 (1828) 152.

"Hab. in insula Luzon" Presl; the record was apparently based on a South American specimen erroneously localized as Philippine.

PIPER CLYPEATUM Wall.; C. DC. Prodr. 16¹ (1869) 378; F.-Vill. Novis. App. (1880) 176.

PIPER MANILLANUM Miq. Syst. Pip. (1843) 339.

"Manille, *Gaudichaud 1836*" de Candolle; the "Philippine" specimen was probably from Singapore or Penang rather than from the Philippines.

PIPER GRANDE Vahl; Opiz in Presl Rel. Haenk. 1 (1828) 156.

"Hab. in insula Luzon" Opiz. Vahl's species, one of doubtful status, seems to be an American form, Haenke's Luzon specimen being either erroneously localized or wrongly identified.

PIPER LATUM HBK.; Opiz in Presl Rel. Haenk. 1 (1828) 159.

"Hab. ad portum Sorzogon in insula Luzon" Opiz. The record was unquestionably based on an American specimen erroneously localized in the Haenke Malaspina Expedition collections.

PIPER RADICANS Vahl Enum. 1 (1804) 333; Opiz in Presl Rel. Haenk. 1 (1828) 159; C. DC. Prodr. 16¹ (1869) 379; F.-Vill. Novis. App. (1880) 176.

Vahl's type was from the Isle of France; Opiz was doubtless in error in referring Haenke's Luzon specimen to this species.

PIPER SYLVESTRE Lam. Ill. 1 (1791) 79; Vahl Enum. 1 (1804) 326; C. DC. Prodr. 16¹ (1869) 361; F.-Vill. Novis. App. (1880) 175.

Lamarck's type material was from "Insula Francia, Malabar, Philippines." As currently interpreted this is an Indian species.

2. ZIPPELIA Blume

ZIPPELIA BEGONIAEFOLIA Blume in Roem. & Schultes Syst. 7 (1830) 1641, 1651; Merr. in Philip. Journ. Sci. 13 (1918) Bot. 6.

Zippelia lappacea Benn. Pl. Jav. Rar. (1838) 76, t. 16.

Piper zippelia C. DC. Prodr. 16¹ (1869) 256.

Piper lappacea C. DC. in Lecomte Fl. Gen. Indo-Chine 5 (1910) 68.

Jolo, *Clemens 9335*. In damp forests, altitude about 600 m. Indo-China and the Malay Peninsula to Sumatra, Borneo, and Java.

3. PEPEROMIA Ruiz and Pavon

PEPEROMIA AGUSANENSIS C. DC. in Leaflet. Philip. Bot. 6 (1914) 2294.

Mindanao (Agusan, Bukidnon), *Elmer 18635*, B. S. 38560 Ramos & Edaña. In the mossy forest, altitude about 1,800 m. Endemic.

Local name: Salimbágat (Mbo.).

PEPEROMIA APOANA C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 411.

Mindanao (Davao), *Copeland 1002*. On trees, altitude about 1,700 m. Endemic.

PEPEROMIA CANLAONENSIS C. DC. Prodr. 5 (1910) Bot. 408.

Negros (Mt. Canlaon), *Phil. Pl. 251 Merrill*. In the mossy forests on trees, altitude about 1,800 m. Endemic.

PEPEROMIA ELMERI C. DC. in Leaf. Philip. Bot. 3 (1910) 761, Philip. Journ. Sci. 5 (1910) Bot. 412.

Mindanao (Davao, Mt. Apo), *Elmer 10493*. On trees in forests, altitude about 1,200 m. Endemic.

Local name: Salibútbut (Bag.).

PEPEROMIA EXIGUA (Blume) Miq. Syst. Pip. (1843) 77, Fl. Ind. Bat. 1² (1858-59) 432; F.-Vill. Novis. App. (1880) 176; C. DC. Prodr. 16¹ (1869) 403, Leaf. Philip. Bot. 3 (1910) 759, Philip. Journ. Sci. 5 (1910) Bot. 410.

Piper exiguum Blume in Verh. Bat. Genoots. 11 (1826) 233, t. 36, f. 7.

Luzon, Mindanao, *Merrill 9785*, *B. S. 11878*, *9543 Robinson*, *Elmer 11004*. On damp cliffs at low and medium altitudes. Tropical Africa, India, and the Malay Archipelago.

Local name: Sigbat-ta-pangpang (Bag.).

PEPEROMIA LAEVIFOLIA (Blume) Miq. Syst. Pip. (1843) 101; C. DC. Prodr. 16¹ (1869) 419; Philip. Journ. Sci. 5 (1910) Bot. 410.

Piper laevifolium Blume Cat. Gew. Buitenz. (1823) 33, Verh. Bat. Genoots. 11 (1826) 229.

Luzon (Bataan, Mt. Mariveles), *Merrill 3205*. On boulders in the mossy forest, altitude 1,200 m. Java.

PEPEROMIA LAGUNAENSIS C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 407.

Peperomia puberulifolia C. DC. op. cit. 412.

Luzon (Laguna, Bataan), *Merrill 5130*, *7514*, *7616*, *B. S. 6047*, *6210*, *6069*, *17310*, *9776*, *9809*, *9760 Robinson*, *27936 Ocampo*, *Baker 2877*. In damp forests on mossy earth, boulders, and trees at medium altitudes. Endemic.

PEPEROMIA LANAOENSIS C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 410.

Mindanao (Lanao, Bukidnon, Zamboanga), *Clemens 625*, *Merrill 8152*, *B. S. 26045 Félix*. On rocks and ledges in ravines and near streams at low and medium altitudes. Endemic.

PEPEROMIA MACGREGORII C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 412.

Luzon (Benguet), *B. S. 3380 McGregor*. In the mossy forest, altitude 2,100 m. Endemic.

PEPEROMIA MARIVELESANA C. DC. in Leaf. Philip. Bot. 3 (1910) 762, Philip. Journ. Sci. 5 (1910) Bot. 413.

Northern and central Luzon, Mindoro, Palawan, *Merrill 6147*, *3721*, *7618*, *B. S. 33164 Ramos*, *678 Foxworthy*, *Elmer 6820*. On mossy ledges and trees on the higher mountains. Endemic.

PEPEROMIA MERRILLII C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 411.

Luzon (Rizal, Cavite), *Merrill 4180*, *Phil. Pl. 270*, *B. S. 29319 Ramos & Edaño 13757*, *1071 Ramos*. On ledges near streams at medium altitudes. Endemic.

PEPEROMIA MINDOROENSIS C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 413.

Mindoro (Mt. Halcon), *Merrill 6107*, *6184*. On mossy trees, altitude about 1,400 m. Endemic.

PEPEROMIA NEGROSENSIS C. DC. in Leaflet. Philip. Bot. 3 (1910) 760, Philip. Journ. Sci. 5 (1910) Bot. 412.

Negros (Cuernos Mts.), *Elmer 9425*. On mossy rocks in shaded ravines. Endemic.

PEPEROMIA PALLIDIBACCA C. DC. in Leaflet. Philip. Bot. 3 (1910) 763, Philip. Journ. Sci. 5 (1910) Bot. 413.

Luzon (Benguet), *Elmer 9344*, *Copeland*, *Clemens*. In the mossy forests, altitude 2,200 m. Endemic.

PEPEROMIA PELLUCIDA (Linn.) HBK. Nov. Gen. Sp. Pl. 1 (1815) 64; C. DC. Prodr. 16¹ (1869) 402; Merr. Fl. Manila (1912) 170.

Piper pellucida Linn. Sp. Pl. (1753) 30.

Peperomia bilineata Miq. in Nov. Act. Acad. Nat. Cur. 19 (1843)

Suppl. 1: 485; F.-Vill. Novis. App. (1880) 176, non Miq. Syst.

Peperomia hymenophylla Miq. in Nov. Act. Acad. Nat. Cur. 19 (1843)

Suppl. 1: 485, Syst. Pip. (1843) 78.

Micropiper tenellum Klotz. ex Miq. Fl. Ind. Bat. 1² (1858-59) 432.

Micropiper pellucidum Miq. Comment. Phyt. (1840) 54.

A pantropic species of American origin, common in the rainy season on and about damp walls in towns and now widely distributed in the Philippines.

Local name: Olasíman-ihálas (C. Bis.).

PEPEROMIA PELLUCIDOPUNCTULATA C. DC. in Leaflet. Philip. Bot. 3 (1910) 760, Philip. Journ. Sci. 5 (1910) Bot. 411.

Northern Luzon to Mindanao, *Merrill 8158*, *Elmer 8436*, *B. S. 2962 Mearns*, 18954, 32441 *McGregor*, 6469 *Robinson*. On mossy trees and wet cliffs at medium and higher altitudes. Endemic.

PEPEROMIA RECURVATA (Blume) Miq. Syst. Pip. (1843) 141; Fl. Ind.

Bat. 1² (1858-59) 435 (var. *philippinensis*); C. DC. Prodr. 16¹

(1869) 440, Philip. Journ. Sci. 2 (1907) 269; F.-Vill. Novis. App.

(1880) 176; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl.

Vasc. Filip. (1886) 220.

Forma **LONGISPICA** C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 409.

Luzon (Benguet, Bontoc), *Merrill 4425*, *Williams 1084*, *Vanoverbergh 835*, *F. B. 4847 Curran*. In damp places along shaded streams.

Forma **PILOSIOR** C. DC. l. c.

Luzon (Benguet, Ifugao, Bontoc), *Merrill 7682*, *Elmer 6622*, *B. S. 19635 McGregor*, *Vanoverbergh 603*. On mossy slopes, boulders, etc., at higher altitudes. Java (the species).

PEPEROMIA REFLEXA (Linn. f.) A. Dietr. Sp. Pl. 1 (1831) 180. C. DC.

Prodr. 16¹ (1869) 451, Philip. Journ. Sci. 5 (1910) Bot. 410 (incl.

formae *subsessilifolia* C. DC., *capensis* C. DC., *parvilimba* C. D., et

callicola C. DC.).

Piper reflexum Linn. f. Suppl. (1781) 91.

Northern Luzon to Mindanao, *Merrill 4583*, 3918, *Phil. Pl. 748*, *Elmer 6077*, 8576, *B. S. 8894 McGregor*, *Williams 1114*. On trees, boulders, and ledges at higher altitudes. In various forms and varieties in the Tropics of both hemispheres.

Local name: Kanapá (Ig.).

PEPEROMIA RIVULORUM C. DC. in Leaf. Philip. Bot. 3 (1910) 762, Philip. Journ. Sci. 5 (1910) Bot. 412.

Mindanao (Mt. Apo), *Elmer 11147, Copeland 933*. On mossy boulders in shaded ravines along streams. Endemic.

Local name: Lambu-lambú (Bag.).

PEPEROMIA RUBRIVENOSA C. DC. in Philip. Journ. Sci. 5 (1910) Bot. 409.

Luzon (Benguet), *Williams 1083*. On trees. Endemic.

PEPEROMIA TOMENTOSA (Vahl) A. Dietr. Sp. Pl. 1 (1831) 172 var. **CARNOSA** C. DC. Prodr. 16¹ (1869) 455, Philip. Journ. Sci. 5 (1910) Bot. 409.

Piper tomentosum Vahl Enum. 1 (1804) 351.

Central Luzon to Mindanao, *Clemens 517, B. S. 20126 De Veyra*. On trees at medium altitudes. Java.

Local name: Libágod (Bag.).

PEPEROMIA VENTENATII Miq. var. **PUBESCENS** Miq. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 485, Fl. Ind. Bat. 1² (1858-59) 434; C. DC. Prodr. 16¹ (1869) 446, Philip. Journ. Sci. 5 (1910) Bot. 408; F.-Vill. Novis. App. (1880) 176.

Luzon (Benguet, Lepanto, Bontoc, Rizal), *Merrill 4592, 7709, Vano-verbergh 488, B. S. 29619 Ramos & Edaña*. In the mossy forest at higher altitudes. Java.

EXCLUDED SPECIES

PEPEROMIA BILINEATA Miq.; Usteri Beitr. Ken. Philip. Veg. (1905) 125.

Usteri's Guimaras specimen was probably wrongly identified.

PEPEROMIA MARIANNENSIS C. DC.; F.-Vill. Novis. App. (1880) 176.

PEPEROMIA MEMBRANACEA Hook.; F.-Vill. l. c.

PEPEROMIA ARGYREIA Morren in Belg. Hort. 17 (1867) 2, t. 2; Merr. Fl. Manila (1912) 170.

An exotic species of American origin occasionally cultivated in Manila for its variegated leaves.

CHLORANTHACEAE

1. CHLORANTHUS Swartz

CHLORANTHUS BRACHYSTACHYS Blume Fl. Jav. Chlor. (1828) 13, t. 2; Miq. Fl. Ind. Bat. 1¹ (1856-57) 801; Solms in DC. Prodr. 16¹ (1869) 475; F.-Vill. Novis. App. (1880) 177; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 220; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 40, 2 (1907) Bot. 269, 5 (1910) Bot. 342.

Common and widely distributed throughout the Archipelago in primary forests at medium and higher altitudes. India to Japan, southward to Malaya.

Local names: Apot (Ig.); damoko (Ig.); emem (Ig.); gapas (Ig.); gumok (Buk.); kari-kari (Bag.); total (Yak.); umuum (Ig.).

CHLORANTHUS OFFICINALIS Blume Enum. Pl. Jav. (1827) 79, Fl. Jav. Chlor. (1828) 10, t. 1; Miq. Fl. Ind. Bat. 1¹ (1856-57) 801; Solms

in DC. Prodr. 16¹ (1869) 474; F.-Vill. Novis. App. (1880) 177; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 220; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 269, Sp. Blancoanae (1918) 119.

Chloranthus inconspicuus Blanco Fl. Filip. ed. 2 (1845) 54, ed. 3, 1 (1877) 101; F.-Vill. Novis. App. (1880) 177, non Sw.

Chloranthus salicifolius Presl Epim. (1851) 231; Walp. Ann. 3 (1852-53) 352; Baill. Adansonia 3 (1863) 206; Miq. Fl. Ind. Bat. 1¹ (1856-57) 801.

Widely distributed in forests at low and medium altitudes from central Luzon southward to Palawan and Mindanao. India to western China, southward through Malaya.

Local names: Barau-bárau (Mang.); sunulampóng (Sub.).

CHLORANTHUS PHILIPPINENSIS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 259.

Luzon (Cagayan, Abulug River), *Weber 1582*. In forests at medium altitudes. Endemic.

CHLORANTHUS VERTICILLATUS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 3.

Luzon (Ifugao, Mt. Polis), *B. S. 19757 McGregor*. In forests at high altitudes. Endemic.

2. ASCARINA Forster

ASCARINA PHILIPPINENSIS C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 70.

Mindanao (Bukidnon, Davao, Mt. Apo), Panay, *Williams 2541, Elmer 11480, B. S. 30647, 38559 Ramos & Edaña, 33332 McGregor*. In forests at high altitudes. Endemic.

Local name: Kari-kari (Bag.).

ASCARINA RETICULATA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 263.

Luzon (Ilocos Norte, Nueva Ecija), *B. S. 26399 Ramos & Edaña, 33323 Ramos*. In forests. Endemic. A small genus otherwise known only from New Caledonia, New Zealand, and southern Polynesia.

Local name: Parukanak (Neg.).

SALICACEAE

1. SALIX Linnaeus

SALIX TETRASPERMA Roxb. Pl. Coromandel 1 (1795) 66, t. 97; Spreng. Syst. 1 (1825) 100; Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 106; F.-Vill. Novis. App. (1880) 210; Merr. Sp. Blancoanae (1918) 119.

Salix azolana Blanco Fl. Filip. ed. 2 (1845) 539, ed. 3, 3 (1879) 188; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 81, Philip. Journ. Sci. 1 (1906) Suppl. 182.

Luzon (Cagayan, Laguna, Rizal, Bulacan), Bohol, Mindanao, *Merrill Sp. Blancoanae 115, Phil. Pl. 461, F. B. 1987, 2139 Ahern's collector, B. S. 26102 Fénix*. In forests in swamps and near streams at low and medium altitudes. India to China, Formosa, southward to Sumatra and Java.

Local names: Libás (Tag.); maksa (C. Bis.); malatíki (Tag.); tiáun (Tag.).

MYRICACEAE

1. MYRICA Linnaeus

MYRICA ESCULENTA Ham. in G. Don Prodr. Fl. Nepal. (1825) 56, var. **FARQUHARIANA** (Wall.) Cheval. Monogr. Myric. (1901) 125; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 269.

Myrica rubra Merr. in Philip. Journ. Sci. 1 (1906) 41, non Sieb. & Zucc.

Myrica nagi Hook. f. Fl. Brit. Ind. 5 (1888) 597, non Thunb.

Myrica farquhariana Wall. Tent. Fl. Nepal. (1826) 61.

Luzon (Bataan, Zambales), Mindoro, in mountain forests, *Whitford 1140, 1174, 1177, F. B. 2595 Meyer*. India to China, the Malay Peninsula, and Borneo.

MYRICA JAVANICA Blume Bijdr. (1825) 517; Fl. Jav. Myric. (1828) 7, t. 1; Cheval. Monogr. Myric. (1901) 129; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 270; Koord. & Val. Atlas Baumart. Java 2 (1914) f. 374.

Myrica vidaliana Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 316; Vidal Rev. Pl. Vasc. Filip. (1886) 259; Ceron Cat. Pl. Herb. Manila (1892) 163; Cheval. Monogr. Myric. (1901) 129.

Central Luzon southward to Mindanao, on the higher mountains, *Merrill Phil. Pl. 1333, Elmer 9743, 11475, 11380*. Java.

Local names: Hindáng (C. Bis.); pagátpat (Bag.).

MYRICA NAGI Thunb. Fl. Jap. (1784) 76; Cheval. Monogr. Myrist. (1901) 116.

Morella rubra Lour. Fl. Cochinch. (1790) 548.

Myrica rubra S. & Z. in Abh. Akad. Münch. 4³ (1846) 230.

Luzon (Zambales), Palawan, *F. B. 3359 Curran, 8074 Curran & Merritt*. On the higher mountains. Japan and China.

JUGLANDACEAE

1. ENGELHARDTIA Leschenault

ENGELHARDTIA APOENSIS Elm. Leaf. Philip. Bot. 7 (1915) 2693.

Mindanao (Davao, Mt. Apo), *Elmer 11744*. On forested ridges, altitude about 1,200 meters. Endemic.

Local name: Lupísan (Bag.).

ENGELHARDTIA COLEBROOKEANA Lindl. in Wall. Pl. As. Rar. 3 (1832) 4, t. 208; Merr. in Philip. Journ. Sci. 12 (1917) Bot. 264.

Luzon (Bontoc, Ilocos Sur), *B. S. 37939 Ramos & Edaño*. On slopes at medium altitudes. India to Burma and southern China.

Local name: Pedpéd (Ilk.).

ENGELHARDTIA PARVIFOLIA C. DC. Prodr. 16² (1864) 141; F.-Vill. Novis. App. (1880) 206; Vidal Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 259.

Northern Luzon to Samar and Leyte, *B. S. 28385 Félix, 28761 Ramos & Edaño, 22437 Ramos, Merrill Phil. Pl. 390, F. B. 27830 Alambra*. In forests at medium altitudes. Endemic.

Local names: Bagatarhán (S. L. Bis.); báгна (Tag.); málayau (Ibn.).

ENGELHARDTIA SPICATA Blume Bijdr. (1825) 528, Fl. Jav. Jugl. (1828) 8, t. 5; C. DC. Prodr. 16² (1864) 140; F.-Vill. Novis. App. (1880) 206; Vidal Sinopsis Atlas (1883) 40, t. 90, f. A, Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 259; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 41, 2 (1907) Bot. 270, Sp. Blancoanae (1918) 120.

Gyrocarpus pendulus Blanco Fl. Filip. ed. 2 (1845) 55, ed. 3, 1 (1877) 104, t. 387.

Engelhardtia philippinensis C. DC. Prodr. 16² (1864) 141; F.-Vill. Novis. App. (1880) 206.

Northern Luzon to Mindanao, *Cuming 1120, 1290, F. B. 1970 Ahern's collector, Merrill 5760, Sp. Blancoanae 176, Elmer 8948, 11489, Williams 2723, B. S. 19753 McGregor, 14630 Ramos*. In forests at low and medium altitudes. India to Burma and Malaya.

Local names: Aroi-oi (Ig.); bibít (Tag.); hanamlód (C. Bis.); lapísan (Bag.); lupísan (Lan.); panyongyóng (C. Bis.); pedpéd (Ting.); píngol (Tag.); polikdik (Ig.); salotsót (Ting.); taguhúsai (Bis.); tariókan (Tag.).

ENGELHARDTIA SUBSIMPLICIFOLIA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 6, Philip. Journ. Sci. 1 (1906) Suppl. 41.

Central Luzon and Mindanao, *Merrill 3942, 3951, 8366, Whitford 1176, F. B. 2759, 2770 Meyer, Elmer 14131*. On forested mountains at medium and higher altitudes. Endemic.

Local name: Buntán (Mbo.).

FAGACEAE

1. CASTANEA Tournefort

CASTANEA MOLLISSIMA Blume Mus. Bot. Lugd.-Bat. 1 (1850) 286; Rehder & Wils. in Sargent Pl. Wils. 3 (1916) 192.

Luzon (Benguet, Lepanto), *Merrill 4614, F. B. 18381 Alvarez*. The former from a cultivated tree grown from introduced seeds, the latter from "mountain top, altitude 6,000 ft." Both specimens agree with the Chinese *Castanea mollissima* Blume, which extends from northern China to Yunnan and Kwangtung and has been confused with the European chestnut, *Castanea vulgaris* Lam.

2. CASTANOPSIS Spach

CASTANOPSIS JAVANICA (Blume) A. DC. in Journ. Bot. 1 (1863) 182, Prodr. 16² (1864) 111; F.-Vill. Novis. App. (1880) 209; Elm. Leaf. Philip. Bot. 3 (1910) 936; Vidal Sinopsis Atlas (1883) 41, t. 92, f. 1.

Castanea javanica Blume Bijdr. (1825) 525, Fl. Jav. Cupulif. (1828) 44, t. 23.

Castanopsis evansii Elm. Leaf. Philip. Bot. 5 (1913) 1778.

Mindanao, Palawan, *Elmer 11269, 10579, 12938, F. B. 15449 Pray, 26556 Rola*. In forests up to 2,000 m altitude. Sumatra, Java, Borneo.

Local name: Gasa (Buk.).

CASTANOPSIS INERMIS (Lindl.) Benth. & Hook. f. ex Jackson Index Kewensis 1 (1895) 456.

Castanea inermis Lindl. in Wall. Pl. As. Rar. 2 (1831) 6.

Castanea glomerata Blume Mus. Bot. Lugd.-Bat. 1 (1850) 283, excl. syn.

Callaeocarpus sumatrana Miq. Pl. Jungh. (1851) 14.

Castanopsis sumatrana A. DC. in Journ. Bot. 1 (1863) 182, Prodr. 16² (1864) 113, Elm. Leaf. Philip. Bot. 3 (1910) 936; King in Ann. Bot. Gard. Calcutta 2 (1889) 103, t. 97.

Luzon (Rizal), Mindanao, Basilan, *B. S. 29615 Ramos & Edaño, 16130 Reillo, Elmer 11315, 14124, 11295*. In dense forests, altitude about 1,000 m. Burma, Malay Peninsula, Sumatra, Lingga, Borneo.

Local names: Linolimón (Bag.); malabásag (Bag.); tayungkájon (Mbo.).

CASTANOPSIS PHILIPPENSIS (Blanco) Vidal Rev. Pl. Vasc. Filip. (1886) 265; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 319, Sp. Blancoanae (1918) 120.

Fagus philippensis Blanco Fl. Filip. ed. 2 (1845) 503, ed. 3, 3 (1879) 132.

Castanopsis sumatrana Vidal Sinopsis Atlas (1883) 41, t. 92, f. H; F.-Vill. Novis. App. (1880) 210, non A. DC.

Castanopsis glabra Merr. in Philip. Journ. Sci. 9 (1914) Bot. 354.

Central Luzon, Mindoro, Samar, Leyte, *Merrill Sp. Blancoanae 672, Phil. Pl. 360, B. S. 2658, 24556 Ramos, F. B. 2148, 2872, 3100 Ahern's collector, 24796 Lomuntad, Wenzel 619, 737*. In forests at medium altitudes. Endemic.

Local names: Bating (Tag.); bayoktoán (Tag.); lobián (Tag.); paun-ñgágan (Tag.); takátak (Tag.); talakálak (Tag.); tulakátak (Tag.); uláyan (S. L. Bis.).

3. QUERCUS Tournefort

QUERCUS APOENSIS Elm. Leaf. Philip. Bot. 3 (1910) 946.

Quercus pseudomolucca Elm. Leaf. Philip. Bot. 3 (1910) 937, non Blume.

Lithocarpus apoensis Rehd. in Journ. Arnold Arb. 1 (1919) 123.

Mindanao (Davao, Mt. Apo), Panay, Samar, *Elmer 11887, 11460, 10511, 11811, 11331, Merrill Phil. Pl. 1643, F. B. 22686 Oro, 24942 Sandique*. In forests, 1,000 to 1,700 m. Endemic.

Local name: Ulayan (Bag., Ak. Bis.).

QUERCUS BENNETTII Miq. Fl. Ind. Bat. 1¹ (1858-59) 857, Suppl. (1860-61) 348; King in Ann. Bot. Gard. Calcutta 2 (1889) 64, t. 58A; F.-Vill. Novis. App. (1880) 207; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 41, 3 (1908) Bot. 328; Elm. Leaf. Philip. Bot. 3 (1910) 937.

Quercus wenzigiana Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 41, non King.

Quercus llanosii Vidal Sinopsis Atlas (1883) 41, t. 91, f. F, Rev. Pl. Vasc. Filip. (1886) 263, non A. DC.

Synaedrys bennettii Koidz. in Bot. Mag. Tokyo 30 (1916) 190.

Lithocarpus bennettii Rehd. in Journ. Arnold Arb. 1 (1919) 123.

Luzon to Mindanao, *F. B. 1826 Klemme, 632, 685, 781, 759 Borden, 7224 Curran, B. S. 32958 Ramos*. In forests at medium altitudes. Malay Peninsula, Borneo, Bangka. The identity of the Philippine form with Miquel's species is not certain.

Local names: Katábang (Tag.); katiban (Tag.); katibang (Tag.); oláyan (Tag.); palonápoi (Sbl.); pangnán (Tag.); pangnán-laláki (Tag.); pagnan (Tag.); ratiban (Tag.); uláyan (Bag., Tag.).

QUERCUS BICOLORATA Elm. Leaf. Philip. Bot. 6 (1913) 1985.

Mindanao (Agusan), *Elmer 18810*. In forests, altitude about 900 m. Endemic.

Local name: Lipákon (Mbo.).

QUERCUS CAGAYANENSIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 6.

Luzon (Cagayan, Ilocos Sur, ? Rizal), *F. B. 26973 Velasco, 6665 Klemme, 25486 Paraiso, 23958 Maneja*. In forests, 60 to 400 m. altitude. Endemic.

Local names: Kakaná (Tag.); olayán (Ibn.).

QUERCUS CASTELLARNAUIANA Vidal Rev. Pl. Vasc. Filip. (1886) 264;

Merr. in Philip. Journ. Sci. 3 (1908) Bot. 326.

Synaedrys castellarnauana Koidz. in Bot. Mag. Tokyo 30 (1916) 190.

Marinduque, *Vidal 1806*. Endemic.

Local name: Puso-púso (Tag.).

QUERCUS CAUDATIFOLIA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 324; Elm. Leaf. Philip. Bot. 3 (1910) 939.

? *Quercus celebica* Vidal Sinopsis Atlas (1883) 41, t. 92, f. A;

F.-Vill. Novis. App. (1880) 207, non Miq.

Synaedrys caudatifolia Koidz. in Bot. Mag. Tokyo 30 (1916) 190.

Lithocarpus caudatifolia Rehd. in Journ. Arnold Arb. 1 (1919) 123.

Luzon to Mindanao, *Whitford 276, Merrill 2702, 2979, Elmer 11884, F. B. 17401 Curran, 806 Borden*. In forests at medium altitudes. Endemic.

Local names: Bayukán (Tag.); dalután (Ilk.); diráan (Ilk.); katábang (Tag.); kerkersáng (Ilk.); makabíngau (Tag.); puso-púso (Tag.); uláyan (Bag.).

QUERCUS CELEBICA Miq. Ann. Mus. Bot. Lugd.-Bat. 1 (1863-64) 110; Elm. Leaf. Philip. Bot. 3 (1910) 938.

Synaedrys celebica Koidz. in Bot. Mag. Tokyo 30 (1916) 194.

Lithocarpus celebica Rehd. in Journ. Arnold Arb. 1 (1919) 123.

Mindanao (Davao), *Elmer 11923*. In forests, altitude about 700 m. Celebes, Buru. The identity of the Philippine form with Miquel's species is doubtful.

QUERCUS CLEMENTIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 321.

Pasania clementis Schky. ex Winkler in Engl. Bot. Jahrb. 49 (1913) 358.

Synaedrys clementis Koidz. in Bot. Mag. Tokyo 30 (1916) 194.

Mindanao (Lanao), Basilan, *Clemens 1188, 906, B. S. 16122 Reillo, F. B. 18909 Miranda*. In forests at medium altitudes. Endemic.

QUERCUS COOPERTA Blanco Fl. Filip. ed. 2 (1845) 503, ed. 3, 3 (1879) 130; A. DC. Prodr. 16² (1864) 105; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 329, Sp. Blancoanae (1918) 129.

Castanea cooperta Oerst. in Vidensk. Selskr. Skr. 9 (1873) 379.

Castanopsis costata F.-Vill. Novis. App. (1880) 209, non A. DC.

? *Quercus fernandezii* Vidal Sinopsis Atlas (1883) 41, t. 92, f. E, Rev. Pl. Vasc. Filip. (1886) 260.

Synaedrys cooperta Koidz. in Bot. Mag. Tokyo 30 (1916) 186.

Lithocarpus cooperta Rehd. in Journ. Arnold Arb. 1 (1919) 124.

Northern Luzon to Mindanao, (Vidal 617), Clemens 1146, B. S. 28419 *Fénix*. In forests at medium altitudes. Endemic.

QUERCUS COPELANDII Elm. Leaf. Philip. Bot. 6 (1913) 1984.

Lithocarpus copelandii Rehd. in Journ. Arnold Arb. 1 (1919) 124.

Mindanao (Davao, Mt. Apo), Elmer 13965. In forests, altitude about 900 m. Endemic.

Local name: Lipákon (Bag.).

QUERCUS CURRANII Merr. in Philip. Journ. Sci. 3 (1908) Bot. 329.

Synaedrys curranii Koidz. in Bot. Mag. Tokyo 30 (1916) 189.

Lithocarpus curranii Rehd. in Journ. Arnold Arb. 1 (1919) 124.

Luzon (Laguna, Mt. Banahao), F. B. 7917, 7918 Curran & Merritt. In forests, altitude 800 to 900 m. Endemic.

QUERCUS CYRTORHYNCHA Miq. Fl. Ind. Bat. Suppl. (1860-61) 350;

Elm. Leaf. Philip. Bot. 3 (1910) 939.

Lithocarpus cyrtorhyncha Rehd. in Journ. Arnold Arb. 1 (1919) 124.

Mindanao (Davao, Mt. Apo), Elmer 11299, 11789. In forests, altitude about 600 m. Malay Peninsula, Sumatra, Borneo.

Local name: Uláyan (Bag.).

QUERCUS DASYSTACHYA Miq. Ann. Mus. Bot. Lugd.-Bat. 1 (1863-64) 221; Elm. Leaf. Philip. Bot. 3 (1910) 938.

Lithocarpus dasystachya Rehd. in Journ. Arnold Arb. 1 (1919) 124.

Mindanao (Davao, Zamboanga), Elmer 11841, Merrill 8267. In forests, altitude about 1,000 m. Borneo.

QUERCUS JORDANAE Laguna Apuntes Sobre Nuev. Roble Filip. (1875) 7, plate; F.-Vill. Novis. App. (1880) 208 (descr.); Vidal Rev. Pl. Vasc. Filip. (1886) 264; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 322.

Quercus havilandii Stapf in Trans. Linn. Soc. Bot. 4 (1894) 231 p.p., quoad Vidal 1814; Perk. Frag. Fl. Philip. (1904) 42.

Quercus caraballoana F.-Vill. Novis. App. (1880) 209; Vidal Rev. Pl. Vasc. Filip. (1886) 265; Ceron Cat. Pl. Herb. Manila (1892) 165.

Quercus sundaica Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 41, non Blume.

Synaedrys jordanae Koidz. in Bot. Mag. Tokyo 30 (1916) 196.

Lithocarpus jordanae Rehd. in Journ. Arnold Arb. 1 (1919) 127.

Luzon (Abra, Bontoc, Benguet, Nueva Vizcaya). In the mossy forest on the higher mountains, altitude 2,000 to 2,400 m. Endemic.

Local names: Katábang (Tag.); kitaldág (Ig.); katápang (Tag.); katilog (Ig.); katíluk (Ig.); kotílik (Ig.); natíleg (Ig.); paláyen (Ting.); ticklick (Ig.); tikléb (Ig.); tilílid (Ig.).

QUERCUS LIPACON Elm. Leaf. Philip. Bot. 6 (1913) 1983.

Lithocarpus lipacon Rehd. in Journ. Arnold Arb. 1 (1919) 128.

Leyte, Mindanao (Agusan), Elmer 13735, Wenzel 759, 815, 932, 1247, 1596. In forests at medium altitudes, extending to about 1,000 m altitude. Endemic.

Local name: Lipákon (Mbo.).

QUERCUS LLANOSII A. DC. Prodr. 16² (1864) 97, excl. syn. Blanco; F.-Vill. Novis. App. (1880) 208; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 323.

Quercus campanoana Vidal Sinopsis Atlas (1883) 41, t. 92, f. D, Rev. Pl. Vasc. Filip. (1886) 260; Ceron Cat. Pl. Herb. Manila (1892) 164.

Quercus sundaica F.-Vill. Novis. App. (1880) 207, excl. syn. Naves, fide Vidal, non Blume.

Synaedrys llanosii Koidz. in Bot. Mag. Tokyo 30 (1916) 196.

Lithocarpus llanosii Rehd. in Journ. Arnold Arb. 1 (1919) 128.

Central Luzon, *Llanos*, Merrill 2344, 2480. In forests at medium altitudes. Endemic.

Local names: Alayan (Tag.); bayúkan (Tag.); kaliban (Tag.); makabiñgau (Tag.); makulab (Neg.); manloáb (Tag.); pagnán (Tag.).

QUERCUS LUZONIENSIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 323, 5 (1910) Bot. 342.

Synaedrys luzoniensis Koidz. in Bot. Mag. Tokyo 30 (1916) 197.

Luzon (Mountain Province, Zambales), Merrill Phil. Pl. 720, F. B. 5040 Curran, B. S. 31975 Santos, 8346 McGregor. In the mossy forest on the higher mountains, altitude 2,000 to 2,300 m. Endemic.

Local names: Iklik (Ig.); kilog (Ig.); paláin (Ig.); ulían (Neg.).

QUERCUS MABESAE Merr. in Philip. Journ. Sci. 13 (1918) Bot. 7.

Luzon (Laguna, Mt. Maquiling), F. B. 26915 *Mabesa*. In forests, altitude 300 m and above. Endemic.

Local name: Uláyan (Tag.).

QUERCUS MERRILLII Von Seem. in Fedde Repert. 5 (1908) 21; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 329; Koidz. in Bot. Mag. Tokyo 30 (1916) 201.

Cyclobalanopsis merrillii Schottky in Engl. Bot. Jahrb. 47 (1912) 648.

Palawan (Mt. Pulgar), B. S. 566 Foxworthy, F. B. 3857, 3858 Curran, Elmer 13219. In mossy thickets, altitude about 1,300 m. Endemic.

Local name: Pungo-púngo (Tagb.).

QUERCUS MERRITTII Merr. in Philip. Journ. Sci. 3 (1908) Bot. 325.

Synaedrys merrittii Koidz. in Bot. Mag. Tokyo 30 (1916) 192.

Lithocarpus merrittii Rehd. in Journ. Arnold Arb. 1 (1919) 128.

Luzon (Laguna, Bataan), F. B. 8047 Curran & Merritt, F. B. 12900 Alvarez. In forests, altitude 450 to 700 m. Endemic.

QUERCUS MINAHASSAE Koord. Syst. Verzeich. 3 (1911) 28; Elm. Leaf. Philip. Bot. 3 (1910) 941.

Mindanao (Davao, Mt. Apo), Elmer 11942. In forests, altitude about 1,300 m. Celebes.

QUERCUS MINDANAENSIS Elm. Leaf. Philip. Bot. 3 (1910) 942.

Quercus acuminatissima Merr. in Philip. Journ. Sci. 3 (1908) Bot. 326, non A. DC.

Quercus celebica Von Seem. in Perk. Frag. Fl. Philip. (1904) 41, non Miq.

Quercus philippinensis Merr. in Philip. Forest. Bur. Bull. 1 (1903) 16, non A. DC.

Synaedrys acuminatissima Koidz. in Bot. Mag. Tokyo 30 (1916) 190.

Lithocarpus mindanaensis Rehd. in Journ. Arnold Arb. 1 (1919) 128.

Leyte, Mindanao (Lanao, Zamboanga, Davao, Misamis), *Ahern* 432, *F. B.* 22455 *Klemme*, 24151, 22938 *Miranda*, *Clemens* 709. In forests at low and medium altitudes. Endemic.

Local names: Bangái (S. L. Bis.); láyan (Mbo.); oláyan (Lan.); oyágan (C. Bis.); uláyan (Bag.).

QUERCUS MONTICOLA King in Ann. Bot. Gard. Calcutta 2 (1889) 44, *t.* 37; Elm. Leaf. Philip. Bot. 3 (1910) 942, 6 (1913) 1982.

Mindanao (Davao, Agusan), *Elmer* 11894, 14164. In forests, altitude about 1,700 m. Sumatra.

Local names: Lipákong (Mbo.); uláyan (Bag.).

QUERCUS OBLIQUINERVIA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 250.

Luzon (Abra, Benguet, Zambales), *F. B.* 18380 *Alvarez*, 8113 *Curran & Merritt*, 14605 *Darling*. On the higher mountains, altitude 1,400 to 2,200 m. Endemic.

Local names: Bultiók (Ting.); tiklík (Ig.).

QUERCUS OVALIS Blanco Fl. Filip. ed. 2 (1845) 502, ed. 3, 3 (1879) 129, *t.* 440; A. DC. Prodr. 16² (1864) 97; F.-Vill. Novis. App. (1880) 208; Vidal Rev. Pl. Vasc. Filip. (1886) 262; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 325, Sp. Blancoanae (1918) 120.

Quercus glabra Blanco Fl. Filip. (1837) 727, non Thunb.

Quercus blancoi A. DC. Prodr. 16² (1864) 97; Vidal Sinopsis Atlas (1883) 41, *t.* 92, *f.* C; Rev. Pl. Vasc. Filip. (1886) 262.

Quercus conocarpa Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t.* 440, non Oudem.

Quercus teysmanni F.-Vill. Novis. App. (1880) 207, non Blume.

Synaedrys ovalis Koidz. in Bot. Mag. Tokyo 30 (1916) 192.

Lithocarpus ovalis Rehd. in Journ. Arnold Arb. 1 (1919) 129.

Luzon (Cagayan to Camarines), *Merrill* 2684, *Sp. Blancoanae* 704, *F. B.* 27073 *Guzman*, 3235 *Russell*, 10017, 5817 *Curran*, *B. S.* 33113 *Ramos*, 1909 *Foxworthy*. In forests at medium altitudes. Endemic.

Local names: Basákan (Bik.); katíban (Tag.); makabíngau (Tag.); manaring (Gad.); mangasiríki (Tag.); manloáb (Tag.); pangnán (Tag.); uayán (Tag.).

QUERCUS PHILIPPINENSIS A. DC. Prodr. 16² (1864) 97; F.-Vill. Novis. App. (1880) 208; Wenzig in Jahrb. Bot. Gart. Berlin 4 (1886) 231; Vidal Rev. Pl. Vasc. Filip. (1886) 265, Phan. Cuming. Philip. (1886) 147; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 328.

Synaedrys philippinensis Koidz. in Bot. Mag. Tokyo 30 (1916) 192.

Lithocarpus philippinensis Rehd. in Journ. Arnold Arb. 1 (1919) 129.

Luzon (Zambales, Tayabas, Laguna, Rizal), *Cuming* 809, *Merrill Phil. Pl.* 304, *Loher* 6958, *B. S.* 27919 *Ocampo*, *Elmer* 8185, *F. B.* 7910, 7911, 7848 *Curran & Merritt*. In forests on the higher mountains, altitude 1,000 to 1,700 m. Endemic.

QUERCUS PRUINOSA Blume in Verh. Bat. Genoots. 9 (1825) 217; A. DC. Prodr. 16² (1864) 87; F.-Vill. Novis. App. (1880) 207; Elm. Leaf. Philip. Bot. 3 (1910) 940.

Lithocarpus pruinosa Rehd. in Journ. Arnold Arb. 1 (1919) 130.

Mindanao (Bukidnon, Davao), *Elmer 10480, 10866*. In forests, altitude about 1,200 m. Java.

Local name: Uláyan (Bag.).

QUERCUS REFLEXA King in Hook. f. Fl. Brit. Ind. 5 (1888) 616, Ann. Bot. Gard. Calcutta 2 (1889) 78, t. 72; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 329; Elm. Leaf. Philip. Bot. 3 (1910) 940, 6 (1913) 1981.

Synaedrys reflexa Koidz. in Bot. Mag. Tokyo 30 (1916) 187.

Castanopsis reflexa Rehd. in Journ. Arnold Arb. 1 (1919) 122.

Luzon (Tayabas, east coast), Samar, Leyte, Mindanao, *Merrill 8268, Copeland 1289, Elmer 11853, 14012, Wenzel 1079, B. S. 15239 Ramos, F. B. 24229 Phasis*. In damp forests at medium altitudes, ascending to 1,200 m. Borneo.

Local names: Lipákon (Mbo.); uláyan (Bag.).

QUERCUS RIZALENSIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 272.

Luzon (Rizal, Tayabas, Camarines), *B. S. 29587 Ramos & Edaño, 9445 Robinson, F. B. 27827 Alambra*. In forests, altitude about 1,000 m. Endemic.

Local name: Basákan (Tag.).

QUERCUS ROBINSONII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 297.

Synaedrys robinsonii Koidz. in Bot. Mag. Tokyo 30 (1916) 192.

Lithocarpus robinsonii Rehd. in Journ. Arnold Arb. 1 (1919) 130.

Luzon (Laguna, Tayabas, Rizal), *B. S. 26666, 17911 Brown, 17143 Robinson*. In forests at 600 to 1,000 m. Endemic.

Local names: Babaysákan (Tag.); basákan (Tag.); katábang (Tag.).

QUERCUS SOLERIANA Vidal Rev. Pl. Vasc. Filip. (1886) 261; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 327; Sp. Blancoanae (1918) 121; Elm. Leaf. Philip. Bot. 6 (1913) 1983.

Quercus molucca Blanco Fl. Filip. (1837) 726, non Linn.

Quercus concentrica Blanco Fl. Filip. ed. 2 (1845) 502, ed. 3, 3 (1879) 129, non Lour.

Quercus costata Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 441, non Blume.

Quercus clementiana Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 41, non King.

Synaedrys soleriana Koidz. in Bot. Mag. Tokyo 30 (1916) 193.

Lithocarpus soleriana Rehd. in Journ. Arnold Arb. 1 (1919) 131.

Northern Luzon to Mindanao. *Elmer 6898, Merrill Sp. Blancoanae 538, F. B. 1824, 1825 Klemme, 5458 Curran, 1148 Ahern's collector, B. S. 4659 Ramos*. In forests at medium altitudes. Endemic.

Local names: Babaysákan (Tag.); barúsang (Tag.); basákan (Tag.); báyan (Mbo.); bayókan (Tag.); bayúkan (Tag.); íhip (Sbl.); kakána (Tag.); katábang (Tag.); katíban (Tag.); lisikan (Tag.); manáreng (Klg.); manáring (Neg.); maráring (Ilk.); oláyan (Tag.); oyágan (Mbo.); tikálad (Bik.); tiklég (Ig.); ulán (Lan.); ulián (Ilk.); umáyan (C. Bis.); uyán (Mbo.).

QUERCUS SUBMONTICOLA Elm. Leaf. Philip. Bot. 3 (1910) 943.

Lithocarpus submonticola Rehd. in Journ. Arnold Arb. 1 (1919) 131.

Mindanao (Davao, Mt. Apo), *Elmer* 11428. In forests, altitude about 1,700 m. Closely allied to *Quercus monticola* King, apparently differing only in its relatively longer fruits. Endemic.

Local name: Tapotása (Bag.).

QUERCUS SUNDAICA Blume in Verh. Bat. Genoots. 9 (1825) 216; Elm.

Leaf. Philip. Bot. 3 (1910) 941; King in Ann. Bot. Gard. Calcutta 2 (1889) 51, t. 47, 48.

Lithocarpus sundaica Rehd. in Journ. Arnold Arb. 1 (1919) 131.

Mindanao (Davao, Mt. Apo), *Elmer* 11949, 11943, 10624, 11245, 11810, 11679. In forests up to 1,900 m altitude. Malay Peninsula, Sumatra, Java.

Local name: Uláyan (Bag.).

QUERCUS VIDALII F.-Vill. Novis. App. (1880) 209; Vidal Sinopsis Atlas (1883) 41, t. 92, f. B, Rev. Pl. Vasc. Filip. (1886) 260; Ceron Cat. Pl. Herb. Manila (1892) 164; Elm. Leaf. Philip. Bot. 6 (1913) 1981.

Northern Luzon to Mindanao, *Vidal* 3898, 617, *B. S.* 26626 *Ramos & Edaño*, 22877, 27883 *McGregor*, *Elmer* 7903, 14096, *Quisumbing* 1287, 1288, *Whitford* 1186. In forests at medium altitudes, ascending to 1,200 m. Endemic.

Local name: Lipákon (Mbo.).

QUERCUS WENZELII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 267.

Synaedrys wenzelii Koidz. in Bot. Mag. Tokyo 30 (1916) 193.

Lithocarpus wenzelii Rehd. in Journ. Arnold Arb. 1 (1919) 132.

Leyte, *Wenzel* 1157, 1008. In forests, altitude about 500 m. Endemic.

QUERCUS WOODII Hance in Journ. Bot. 12 (1874) 240; F.-Vill. Novis.

App. (1880) 208; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 326, 5 (1910) Bot. 342, Sp. Blancoanae (1918) 21.

Synaedrys woodii Koidz. in Bot. Mag. Tokyo 30 (1916) 193.

Luzon (Mountain Province), *Wood*, *Williams* 949, 980, *Elmer* 5900, *Vano-verbergh* 1065, 2201, *Sandkuhl* 186. In forests, altitude 1,400 to 2,000 m. Endemic.

Local names: Tigdóg (Ig.); tiklík (Ig.).

QUERCUS ZSCHOKKEI Elm. Leaf. Philip. Bot. 3 (1910) 944.

Lithocarpus zschokkei Rehd. in Journ. Arnold Arb. 1 (1919) 132.

Mindanao (Davao, Zamboanga), *Elmer* 10846, *F. B.* 22019 *Villamil*. In forests, altitude 75 to 900 m. Endemic.

DOUBTFUL AND EXCLUDED SPECIES

QUERCUS ARGENTATA Korth.; F.-Vill. Novis. App. (1880) 207.

QUERCUS CERRIS Blanco Fl. Filip. (1837) 727, ed. 2 (1845) 503, ed. 3, 3 (1879) 130; Merr. Sp. Blancoanae (1918) 121, non Linn.

Blanco's description is very imperfect, and was based on a single fruit. F.-Villar was certainly wrong in referring it to *Castanopsis javanica* A. DC.

QUERCUS DAPHNOIDEA Blume; F.-Vill. Novis. App. (1880) 207.

QUERCUS DIEPENHORSTII Miq.; F.-Vill. l. c.

QUERCUS INDUTA Blume; F.-Vill. l. c.

QUERCUS LAMPONGA Miq.; F.-Vill. l. c.

QUERCUS NITIDA Von Seem. in Perk. Frag. Fl. Philip. (1904) 42, non Blume.

The specimen cited is a mixture, the detached fruits a *Quercus* near *Q. reflexa* King, and the leafy branch perhaps a species of *Parinarium*.

QUERCUS OMALOKOS Korth.; F.-Vill. Novis App. (1880) 207.

QUERCUS REINWARDTII Korth.; F.-Vill. l. c.

ULMACEAE

1. CELTIS Linnaeus

CELTIS ASPERIFOLIA Merr. in Philip. Journ. Sci. 17 (1920) 246.

Mindanao (Davao), *F. B. 27562 De Mesa*. In thickets or forests at low altitudes. Endemic.

Local name: Sikím (Tagk.).

CELTIS CINNAMOMEA Lindl. in Wall. Cat. (1831) No. 3696, *nomen nudum*; Planch. in Ann. Sci. Nat. Bot. III 10 (1848) 303, DC. Prodr. 17 (1873) 181; Hook. f. Fl. Brit. Ind. 5 (1888) 482.

Celtis crenato-serrata Merr. in Philip. Journ. Sci. 5 (1910) Bot. 174.

Luzon (Cagayan, Bataan), *F. B. 20043 Topacio, 26259, 27081 Bernardo, 17747 Curran, 26744 Mabesa & Sulit, Adduru 48*. In open forests at low altitudes. India and Ceylon to Java and Sumatra. The Philippine form produces a wood with a very disgusting odor, as noted by Thwaites for the Ceylon form.

Local names: Malabutúlan (Tag.); takúlau (Ibn.).

CELTIS LUZONICA Warb. in Perk. Frag. Fl. Philip. (1905) 164.

Northern Luzon to Mindanao, in thickets and forests at low altitudes. Closely allied to *Celtis philippensis* Blanco. Endemic.

Local names: Dálu (Bag.); kayonkóng (C. Bis.); magabóyo (P. Bis.); malaímo (Bik.); malaikmo (Tag.); malaítmo (Tag.); manikbubúyu (P. Bis.); maragauíd (Ilk.); maragouéd (Ilk.); oáu (C. Bis.); olaróg (Bik.); tabau (P. Bis.); udáyu (Mbo.); ulálo (P. Bis.).

CELTIS PHILIPPENSIS Blanco Fl. Filip. (1837) 197, ed. 2 (1845) 139, ed. 3, 1 (1877) 249; Planch. in Ann. Sci. Nat. Bot. III 10 (1848) 206, DC. Prodr. 17 (1873) 184 (*philippinensis*); F.-Vill. Novis. App. (1880) 197; Vidal Sinopsis Atlas (1883) 39, t. 85, f. A, Rev. Pl. Vasc. Filip. (1886) 248, Phan. Cuming. Philip. (1885) 144; Merr. in Philip. Forestry Bur. Bull. 1 (1903) 16, Philip. Journ. Sci. 1 (1906) Suppl. 42.

Solenostigma philippensis Miq. Fl. Ind. Bat. 1² (1858-59) 220 (*philippinensis*).

Celtis mindanaensis Elm. Leaf. Philip. Bot. 8 (1915) 2842.

Celtis multifolia Elm. in herb.

Northern Luzon to Mindanao and Palawan, common in thickets and open forests at low altitudes. Southeastern China and Formosa to north-

eastern Australia. The Indo-Malayan *Celtis wightii* Planch. is doubtfully distinct.

Local names: Abúyo (Chab.); amaman (Bik.); bugabua (Bik.); enlaid (Tagb.); habúyo (Chab.); isóg (Bag.); logóg (Bis.); lunás-bató (Tag.); lunís (Tag.); magabúyo (Bik.); malagabuyó (Tag.); malagibúyo (P. Bis.); maligagók (Ilk.); maligmo (Tag.); malikmo (Tag.); malingagók (Ilk.); malitmo (Tag.); mangonkóng (P. Bis.); maragaoág (Ibn.); maragaoéd (Ilk.); maragauíd (Ilk., Pang.); odálo (S. L. Bis.); oratán (Ilk.); payápa (Tag.); toñgautóñgau (Bik.); uáu (C. Bis.); udáiu (C. Bis.); ulálo (P. Bis.); ularóg (Bik.); uláu (S. L. Bis.); uraróg (Bik.); uratán (Ilk.); yagáu (C. Bis.).

CELTIS RUBROVENIA Elm. Leaf. Philip. Bot. 2 (1908) 464.

Luzon (Ilocos Norte, Bontoc, Benguet), *Vidal 1330, Loher 5037, Elmer 6040, 8775* (distributed as *Grewia*), *Vanoverbergh 1741, 2578*. On forested ridges, altitude 1,000 to 1,400 m. Endemic.

Local name: Palek (Bon.).

Var. **INTEGRA** Merr. var. nov. A typo differt foliis integerrimis.

Luzon (Ilocos Norte, Mt. Nagapatan), *B. S. 33201 Ramos*, August, 1918. On dry slopes, altitude about 500 m. Endemic.

2. TREMA Loureiro

TREMA AMBOINENSIS (Willd.) Blume Mus. Bot. Lugd.-Bat. 2 (1856) 61, quoad syn., excl. descr!; Merr. Interpret. Herb. Amb. (1917) 187. *Celtis amboinensis* Willd. Sp. Pl. 4² (1805) 997.

Sponia amboinensis Decne. in Nuov. Ann. Mus. Paris 3 (1834) 498.

Sponia virgata Planch. in Ann. Sci. Nat. Bot. III 10 (1848) 316, DC. Prodr. 17 (1873) 195 (incl. var. *major* Planch.).

Sponia glabrescens Planch. in Ann. Sci. Nat. Bot. III 10 (1848) 317; Walp. Ann. 3 (1853) 403; Miq. Fl. Ind. Bat. 1² (1858-59) 217.

Trema virgata Blume Mus. Bot. Lugd.-Bat. 2 (1856) 59.

Trema timorensis Blume Mus. Bot. Lugd.-Bat. 2 (1856) 60; Bernard in Bull. Herb. Boiss. II 6 (1906) 33.

Trema aspera Blume Mus. Bot. Lugd.-Bat. 2 (1856) 58; F.-Vill. Novis. App. (1880) 197.

Trema aspera Blume var. *viridis* Benth. Fl. Austral. 6 (1873) 158; Vidal Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 248.

Trema morifolia Blume Mus. Bot. Lugd.-Bat. 2 (1856) 59; Lauterb. in Engl. Bot. Jahrb. 50 (1913) 318, saltem quoad Philipp.

Mindoro, southern Luzon (Camarines), Samar, Leyte, Negros, and Mindanao. In old clearings, second-growth forests, thickets, etc., at low altitudes. Southern China to the Malay Peninsula, southward to New Guinea, northeastern Australia, and the Caroline Islands.

It is very probable that this form is identical with *Trema cannabina* Lour. Fl. Cochinch. (1790) 563, the type of the genus. Lauterbach, in Engl. Bot. Jahrb. 50 (1913) 321, is entirely wrong in his interpretation of *Trema amboinensis* (Willd.) Blume.

Local names: Anabión (Bik.); hanagdón (C. Bis.); inangdón (Mang.); latóng (P. Bis.).

- TREMA ORIENTALIS** (Linn.) Blume Mus. Bot. Lugd.-Bat. 2 (1856) 62; F.-Vill. Novis. App. (1880) 197; Lauterb. in Engl. Bot. Jahrb. 50 (1913) 320 (incl. var. *argentea* Lauterb., var. *rigida* Lauterb., var. *amboinensis* Lauterb., (non *T. amboinensis* Blume), et var. *viridis* Lauterb.); Merr. Sp. Blancoanae (1918) 121.
- Celtis orientalis* Linn. Sp. Pl. (1753) 1044.
- Sponia amboinensis* Decne. in DC. Prodr. 17 (1873) 198; Miq. Fl. Ind. Bat. 1² (1858-59) 216, non *Trema amboinensis* (Willd.) Blume.
- Trema amboinensis* F.-Vill. Novis. App. (1880) 197; Vidal Sinopsis Atlas (1883) 39, t. 85, f. C, Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 248; Merr. in Philip. Forestry Bur. Bull. 1 (1903) 16, Philip. Journ. Sci. 1 (1906) Suppl. 42, 3 (1908) Bot. 401, Fl. Manila (1912) 171, non (Willd.) Blume.
- Celtis lima* Blanco Fl. Filip. (1837) 197, ed. 2 (1845) 139, ed. 3, 1 (1877) 250, non Lam.
- Sponia blancoi* Planch. in Ann. Sci. Nat. Bot. III 10 (1848) 327; Walp. Ann. 3 (1853) 405; Miq. Fl. Ind. Bat. 1² (1858-59) 218.
- Trema blancoi* Blume Mus. Bot. Lugd.-Bat. 2 (1856) 58.
- Sponia velutina* Planch. in Ann. Sci. Nat. Bot. III 10 (1848) 328.

Throughout the Philippines at low and medium altitudes, in places ascending to an altitude of 2,000 m; usually abundant. A characteristic shrub or small tree in deserted clearings, thickets, and second-growth forests. India to southern China, southward to northeastern Australia and Polynesia.

Local names: Agandúng (Ibn.); alindagón (Sul.); anabióng (Bis., Tag.); anadúng (Bon.); anagdúng (P. Bis.); anagúm (Bik.); anarióng (Iv.); anaróng (Sbl.); anádung (Bon.); andaluióng (Buk.); arandón (Ilk.); du-ung (Sul.); hágod (Tag.); hanadióng (Tag.); hanagdóng (Bik., S. L. Bis.); hanagdón (Tag.); hanagdong (Tag.); hanarión (Tag.); hinagdúng (Tag.); hiplalóng (Pamp.); hubúlos (Bon.); inandóng (Tag.); indai lúging (Lan.); inugdón (Tag., Bis.); lagód (Tag.); lamái (Ilk.); langóng (Sub.); malarúng (Tag.); malarúrang (Tag.); malasikong duróng (Pam.); mandalógon (Bag.); nagdón (P. Bis.); pangarandóngen (Ilk.); pangarandúngin (Ilk.); pitidán (Ig.); pitikán (Ig.); tatagtág (P. Bis.).

3. APHANANTHE Planchon

- APHANANTHE PHILIPPINENSIS** Planch. in Ann. Sci. Nat. Bot. III 10 (1848) 337; Walp. Ann. 3 (1852-53) 408; Miq. Fl. Ind. Bat. 1² (1858-59) 219; Benth. in Hook. Ic. III 2 (1876) 65, t. 1741, Fl. Austral. 6 (1873) 160; Planch. in DC. Prodr. 17 (1873) 208; F.-Vill. Novis. App. (1880) 197; Vidal Sinopsis Atlas (1883) 39, t. 85, f. B, Rev. Pl. Vasc. Filip. (1886) 249, Phan. Cuming. Philip. (1885) 145; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 42.
- Taxotrophis rectinervis* F.-Muell. Frag. 6 (1863-64) 192.

Northern and central Luzon. In thickets and second-growth forests at low altitudes, locally abundant. Eastern tropical and subtropical Australia.

Local names: Alasiis (Tag.); dularíng (Ilk.); kalisis (Tag.); malaásis (Tag.); malaisiis (Tag.); siis (Tag.).

4. GIRONNIERA Gaudichaud

GIRONNIERA CELTIDIFOLIA Gaudich. Bot. Freycinet's Voy. (1844) t. 85; Planch. in Ann. Sci. Nat. III 10 (1848) 340, DC. Prodr. 17 (1873) 207; Miq. Fl. Ind. Bat. 1² (1858-59) 233; F.-Vill. Novis. App. (1880) 98; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 249; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 270.

Southern Luzon (Camarines, Albay), Samar, Leyte, Mindanao, *Cuming 870, B. S. 30393, 17450 Ramos, 21493 Escritor, Merrill Phil. Pl. 1165, Elmer 7084, 13509.* In forests at low and medium altitudes. Bismarck Archipelago, Solomon Islands, Fiji, Samoa.

Local names: Amamampáng (Bik.); aragási (S. L. Bis.); gulága (Mbo.); magaubáu (S. L. Bis.); taguntagúnan (Mbo.).

GIRONNIERA CUSPIDATA (Blume) Kurz Forest Fl. Brit. Burma 2 (1877) 470; J. J. Sm. in Meded. Dept. Landbouw 10 (1910) 668.

Cyclostemon cuspidatum Blume Bijdr. (1825) 599.

Gulumpita cuspidata Blume Mus. Bot. Lugd.-Bat. 2 (1856) 73.

Aphananthe cuspidata Planch. in DC. Prodr. 17 (1873) 209.

Gironniera reticulata Thw. Enum. Pl. Zeyl. (1859-64) 262; Hook. f. Fl. Brit. Ind. 5 (1888) 486.

Gironniera curranii Merr. in Philip. Journ. Sci. 4 (1909) Bot. 251.

Luzon (Camarines), Mindanao (Davao), *F. B. 10498 Curran, Elmer 11059.* In forests at medium altitudes. India and Ceylon to Java and Celebes.

Local name: Dulsís (Bag.).

GIRONNIERA GLABRA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 42.

Aphananthe negrosensis Elm. Leaf. Philip. Bot. 2 (1909) 575.

Luzon (Tayabas, Rizal, Bataan, Sorsogon), Negros, *Merrill 5185, Whitford 1205, B. S. 3297, 19518 Ramos, Elmer 9801, 15574.* In mountain forests up to 1,200 m altitude. Endemic.

Local names: Bálau (C. Bis.); galigúon (If.); galikón (If.); kálau (C. Bis.); uráng (Tag.).

GIRONNIERA SIBUYANENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1845.

Luzon (Cagayan to Sorsogon), Mindoro, Sibuyan, *B. S. 28084 Fénix, 20783 Escritor, 19531, 23453 Ramos, Elmer 12077, 7388, 9182, Loher 6937.* In forests at low and medium altitudes. Endemic. Closely allied to *Gironniera celtidifolia* Gaudich.

Local name: Amaitán (Ibn.).

GIRONNIERA SUBAEQUALIS Planch. in Ann. Sci. Nat. Bot. III 10 (1848) 339; F.-Vill. Novis. App. (1880) 198; Vidal Rev. Pl. Vasc. Filip. (1886) 249.

Samar, *F. B. 23588 Lasqueti.* In forests, altitude about 200 m. Ceylon to southern China, southward to Java and New Guinea (var. *papuana* J. J. Sm.). Vidal 604, from a note made by me at Kew in 1907, is apparently a form of *Gironniera celtidifolia* Planch. or *G. sibuyanensis* Elm.

Local name: Ngahil (S. L. Bis.).

MORACEAE

1. *FATOUA* Gaudichaud

FATOUA PILOSA Gaudich. Bot. Frey. Voy. (1826) 509; F.-Vill. Novis. App. (1880) 198; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 249.

Fatoua japonica Blume Mus. Bot. Lugd.-Bat. 2 (1856) t. 38; Valetton in Bull. Dept. Agr. Ind. Néerl. 10 (1907) 5; Merr. Fl. Manila (1912) 179.

Urtica japonica Thunb. Fl. Jap. (1784) 70, non Linn. f.

Urtica manillensis Walp. Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 423.

Northern Luzon to Mindanao; in dry thickets, on walls, cliffs, etc., at low altitudes. Japan and China southward to Malaya.

Local names: Sarungkár-a-babasít (Ilk.); sikir (Ilk.).

2. *PARATROPHIS* Blume

PARATROPHIS GRANDIFOLIA Elm. Leaf. Philip. Bot. 5 (1913) 1814.

Palawan, Luzon (Sorsogon), *Elmer 13176, B. S. 23382 Ramos*. In damp forests at low and medium altitudes. Scarcely other than a large-leaved form of *Paratrophis philippinensis* F.-Vill. Endemic.

Local name: Magtónob (Mbo.).

PARATROPHIS PHILIPPINENSIS (Bureau) F.-Vill. Novis. App. (1880) 98; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 250.

Uromorus philippinensis Bureau in DC. Prodr. 17 (1873) 237; Vidal Cat. Pl. Prov. Manila (1880) 43.

Luzon (Laguna, Tayabas, Albay), Samar, Mindanao, *Cuming 919, F. B. 12674 Rosenbluth & Tamesis, Merrill 1087, Phil. Pl. 1638, Clemens 569, Elmer 10827*. In damp forests at low and medium altitudes. Endemic.

Local names: Agusus (Tag.); bulaus (Neg.); spai (Bag.).

3. *MORUS* Tournefort

MORUS ALBA Linn. Sp. Pl. (1753) 986; Blanco Fl. Filip. (1837) 705, ed. 2 (1845) 489, ed. 3, 3 (1879) 109, t. 209; F.-Vill. Novis. App. (1880) 198; Vidal Sinopsis Atlas (1883) 39, t. 85, f. D (var. *latifolia* Bureau); Merr. in Philip. Journ. Sci. 3 (1908) Bot. 404, Fl. Manila (1912) 178, Sp. Blancoanae (1918) 122.

Morus indica Linn. Sp. Pl. (1753) 986; Miq. Fl. Ind. Bat. 1² (1858-59) 279.

The mulberry, widely distributed in the Philippines in cultivation, is thoroughly naturalized in the Batan Islands and northern Luzon (Cagayan); perhaps of ancient introduction here. According to Blanco the mulberry was first introduced into the Philippines in 1780. A native of tropical Asia, now in all warm countries.

Local names: Amingít (Ig.); amóras (Ilk.); móra (Ibn.); morál (Sp.); moráya (Ibn.); morera (Sp.); tanúd (Iv.); tanyúd (Iv.).

4. *PSEUDOTROPHIS* Warburg

PSEUDOTROPHIS MINDANAENSIS Warb. in Perk. Frag. Fl. Philip. (1905) 165.

Paratrophis caudata Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 183.

Taxotrophis mindanaensis Elm. Leaf. Philip. Bot. 5 (1913) 1815, in nota, sphalm.

Leyte, Cebu, Mindanao, Basilan. In thickets and forests at low altitudes. Endemic. The only other known representative of the genus occurs in the Key Islands.

Local names: Hulas (Bag.); olis (Yak.); taitai (Chab.).

5. ALLAEANTHUS Thwaites

ALLAEANTHUS LUZONICUS (Blanco) F.-Vill. Novis. App. (1880) 198; Vidal Sinopsis Atlas (1883) 39, t. 86, f. A, Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 250; Merr. Sp. Blancoanae (1918) 122.

Morus luzonica Blanco Fl. Filip. (1837) 703.

Broussonetia luzoniensis Blanco op. cit. ed. 2 (1845) 488, ed. 3, 3 (1879) 107, t. 278.

Broussonetia luzonica Bureau in DC. Prodr. 17 (1873) 224.

Northern Luzon to Mindanao and Basilan. In thickets, second-growth forests, etc., at low and medium altitudes, in some localities ascending to 1,100 m; common. Endemic.

Var. **GLABER** (Warb.) comb. nov.

Allaeanthus glaber Warb. in Perk. Frag. Fl. Philip. (1905) 166.

Range of the species, from which it differs only in its less-pubescent leaves.

Local names: Alibabág (Ibn.); alibabák (Ibn.); alibaibái (Ibn.); alitagtág (Bik.); alokón (Ig., Ilk., Pang.); babáyan (Tag., Sbl.); baég (Ilk.); bagh (Mag.); baglí (Sul.); balitagtág (Bik.); bálong-kadiós (Bis.); bo-ñgón (Ilk.); buñgón (Ilk.); himbabá-o (Tag.); imbabá-u (Tag.); kabág (Bis.); karúd (C. Bis.); libá (Bag.); malambíngan (Sul.); talólong (Ilk.); tutu (Sul.).

EXCLUDED SPECIES

ALLAEANTHUS ZEYLANICUS Thwaites; F.-Vill. Novis. App. (1880) 198.

6. MALAISIA Blanco

MALAISIA SCANDENS (Lour.) Planch. in Ann. Sci. Nat. Bot. IV 3 (1855) 293; Blume Mus. Bot. Lugd.-Bat. 2 (1856) 76; K. Schum. in Engl. Bot. Jahrb. 9 (1888) 199 (incl. var. *blancoi* K. Sch. l. c.); Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 43, Fl. Manila (1912) 178, Sp. Blancoanae (1918) 122.

Caturus scandens Lour. Fl. Cochinch. (1790) 613.

Trophis scandens Hook. & Arn. Bot. Beechy's Voy. (1841) 214.

Malaisia tortuosa Blanco Fl. Filip. (1837) 789, ed. 2 (1845) 543, ed. 3, 3 (1879) 196; Blume Mus. Bot. Lugd.-Bat. 2 (1856) 75; Miq. Fl. Ind. Bat. 1² (1858-59) 282; Bureau in DC. Prodr. 17 (1873) 221 (incl. var. *racemosa* Bureau); F.-Vill. Novis. App. (1880) 198; Vidal Sinopsis Atlas (1883) 39, t. 86, f. B, Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 250; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 78.

Malaisia blancoi Elm. Leaf. Philip. Bot. 5 (1913) 1812.

Caturus torulosus Seem. Fl. Vit. (1868) 254.

Northern Luzon to Mindanao and Palawan. In thickets and forests at low and medium altitudes. China and Formosa to Malaya, Australia, and Polynesia.

Local names: Hiñgí (Tag.); hingiu (Tag.); hinguin (Tag.); malais-ís (Tag.); sabá (Tag.); sádak (Ilk.); salimpágot (Tagb.); sígid (P. Bis.).

7. TAXOTROPHIS Blume

TAXOTROPHIS MACROPHYLLA (Blume) Boerl. Handl. Fl. Nederl. Ind. 3 (1900) 379.

Streblus macrophyllus Blume Mus. Bot. Lugd.-Bat. 2 (1856) 80.

Diplocos macrophylla Bureau in DC. Prodr. 17 (1873) 216.

Taxotrophis ilicifolia Vidal Rev. Pl. Vasc. Filip. (1886) 249; Ceror. Cat. Pl. Herb. Manila (1892) 157; Usteri Beitr. Ken. Philip. Veg. (1905) 127; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 16, Interpret. Herb. Amb. (1917) 188; Hutchins. in Kew Bull. (1918) 150, f. 1.

Balanostreblus ilicifolia Kurz in Journ. As. Soc. Beng. 42¹ (1873) 247, t. 19, p. p.

Taxotrophis obtusa Elm. Leaf. Philip. Bot. 5 (1913) 1813; Hutchins. in Kew Bull. (1918) 150.

Luzon (Tayabas, Laguna, Camarines), Mindoro, Palawan, Negros, Cebu, Mindanao, Basilan. In dry thickets and thin forests at low altitudes. Chittagong, Burma, Indo-China, Malay Peninsula, Celebes, and the Moluccas.

Taxotrophis ilicifolia Vidal was published without reference to *Balanostreblus ilicifolia* Kurz, the latter being identical with Vidal's species only as to the male flowers. *Taxotrophis obtusa* Elm. is certainly only a form of Vidal's species with smaller entire leaves, *F. B. 21477 Fernandez* from Palawan presents normal leaves of *T. ilicifolia* and normal leaves of *T. obtusa* on the same plant. The proper name for the species seems to be *Taxotrophis macrophylla* (Blume) Boerl., based on a Celebes specimen.

Local names: Dagpít (P. Bis.); gúlus (P. Bis.); kolis-kolí (Tag.); kurus-kurus (Bik.); kuyas-kúyas (Tag.); kuyos-kúyos (Tag.); suting-gimba (Yak.); talingáan (C. Bis.).

8. STREBLUS Loureiro

STREBLUS ASPER Lour. Fl. Cochinch. (1790) 615; Miq. Fl. Ind. Bat. 1² (1858-59) 278; Bureau in DC. Prodr. 17 (1873) 218; F.-Vill.

Novis. App. (1880) 198; Vidal Sinopsis Atlas (1883) 39, t. 86, f. C, Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 250; Merr. Fl. Manila (1912) 177, Sp. Blancoanae (1918) 123.

Calis lactescens Blanco Fl. Filip. (1837) 698, ed. 2 (1845) 485, ed. 3, 3 (1879) 103, t. 171; Bureau in DC. Prodr. 17 (1873) 278.

Streblus lactescens Blume Mus. Bot. Lugd.-Bat. 2 (1856) 80.

Northern Luzon to Palawan and Mindanao. In thickets at low altitudes, especially common in regions subject to a long dry season. India to southern China and Malaya.

Local names: Alúdig (Ilk.); ampás (Pamp.); bagták (P. Bis.); balangí-king (Ibn.); buntátai (P. Bis.); kagasáka (Ibn.); kakadli (Tag.); kaliós (Tag.); kallós (Ibn.); lampataki (Tagb.).

9. PHYLLOCHLAMYS Bureau

PHYLLOCHLAMYS TAXOIDES (Heyne) Koord. Exkursionsfl. Java 2 (1912) 89, var. **PARVIFOLIA** Merr. in Philip. Journ. Sci. 14 (1920) 247.

Taxotrophis taxoides Heyne in Roth Nov. Pl. Sp. (1821) 368.

Trophis spinosa Roxb. Fl. Ind. ed. 2, 3 (1832) 762.

Phyllochlamys spinosa Bureau in DC. Prodr. 17 (1873) 218.

Palawan, Merrill 9482. In dry forests at low altitudes. India and Ceylon to Indo-China and Timor, the variety endemic.

10. VANIERIA Loureiro

(*Cudrania* Trécul)

VANIERIA COCHINCHINENSIS Lour. Fl. Cochinch. (1790) 565.

Cudrania javanensis Tréc. in Ann. Sci. Nat. Bot. III 8 (1847) 123; F.-Vill. Novis. App. (1880) 202; Merr. Fl. Manila (1912) 179, Interpret. Herb. Amb. (1917) 189, Sp. Blancoanae (1918) 123 (*javanensis*).

Trophis spinosa Blume Bijdr. (1825) 489, non Roxb.

Batis spinosa Roxb. Hort. Beng. (1814) 71.

Morus tinctoria Blanco Fl. Filip. (1837) 704, non Linn.

Broussonetia tinctoria Blanco op. cit. ed. 2 (1845) 488, ed. 3, 3 (1879) 108, t. 418.

Cudrania obovata Tréc. in Ann. Sci. Nat. Bot. III 8 (1847) 126; Miq. Fl. Ind. Bat. 1² (1858-59) 291; F.-Vill. Novis. App. (1880) 202; Vidal Sinopsis Atlas (1883) 40, t. 88, f. C, Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 254; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 80.

Cudrania spinosa Hochr. in Bull. N. Y. Bot. Gard. 6 (1910) 271.

Northern Luzon to Mindanao, sea level to an altitude of 1,400 m. India to East Africa, China, Malaya, and Australia. Loureiro's genus and species are clearly identical with *Cudrania javanensis* Tréc.

Local names: Kokom-pusa (Ilk.); patdang-labúyo (Tag.); tahid-labúyo (Tag.); talobtób (Sbl.); talólong (Ilk., Ig.).

VANIERIA GRANDIFOLIA (Merr.) comb. nov.

Cudrania grandifolia Merr. in Philip. Journ. Sci. 18 (1921) 52.

Mindanao (Surigao), Wenzel 1883. In forests at low and medium altitudes. Endemic.

EXCLUDED SPECIES

CUDRANIA PUBESCENS Tréc.; F.-Vill. Novis. App. (1880) 202.

11. PARARTOCARPUS Baillon

PARARTOCARPUS WOODII (Merr.) comb. nov.

Artocarpus woodii Merr. in Philip. Journ. Sci. 3 (1908) Bot. 221.

Gymnartocarpus woodii Merr. in Philip. Journ. Sci. 18 (1921) 52.

Luzon (Cagayan to Camarines), Mindoro, Samar, Leyte, Bucas, Mindanao. In forests at low and medium altitudes. Endemic.

Local names: Anúbíng-kadiós (Tag.); anúbíng-kagiós (Tag.); anúbíng-na-nangka (Tag.); bayúko (Bik.); biga (S. L. Bis.); bitúun (Tag.); buratú (Ibn.); malanáńka (Tag.); pangi (Bik.); pongí (Ilk.); sulipa (Tag.); tabuli (Bik.).

I follow Beccari* in reducing the genus *Gymnartocarpus* to *Parartocarpus*.

* Nelle Foreste di Borneo (1902) 632.

12. ARTOCARPUS Forster

ARTOCARPUS ACUMINATISSIMA Merr. in Philip. Journ. Sci. 18 (1921) 49.

Luzon (Tayabas), *F. B. 22777 De Mesa & Rosario*. In dense forests at low altitudes. Endemic.

Local name: Kúbi (Tag.).

ARTOCARPUS BLANCOI (Elmer) comb. nov.

Artocarpus incisa Linn. f. var. *blancoi* Elm. Leaf. Philip. Bot. 2 (1909) 617.

Artocarpus incisa Blanco Fl. Filip. (1837) 668, ed. 2 (1845) 465, ed. 3, 3 (1879) 75, non Linn. f.

Artocarpus communis Forst. var. Merr. Sp. Blancoanae (1918) 124.

Batan Islands and northern Luzon to Negros, Mindoro, Palawan, and Mindanao, *Merrill Sp. Blancoanae 214, Phil. Pl. 1819*. In thickets and forests at low and medium altitudes; common. Endemic.

This form is strictly wild, is never cultivated, and has inedible fruits. It has long been confused with the true breadfruit, *Artocarpus communis* Forst., from which it can be distinguished by the elongated tips of the anthocarps.

Local names: Antipólo (Tag.); chipúho (Iv.); kálo (Bis.); kólo (Bis.); pakák (Ilk.); tipólo (Tag., Pamp., Bik., P. Bis.).

ARTOCARPUS COMMUNIS Forst. Char. Gen. (1776) 101; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 43, 3 (1908) Bot. 401, Fl. Manila (1912) 176, Sp. Blancoanae (1918) 123, 124; Elm. Leaf. Philip. Bot. 2 (1909) 615.

Radermachia incisa Thunb. in Vet. Akad. Handl. Stockh. (1776) 254.

Artocarpus incisa Linn. f. Suppl. (1781) 411; F.-Vill. Novis. App. (1880) 202; Vidal Sinopsis Atlas (1883) 40, t. 88, f. B, Rev. Pl. Vasc. Filip. (1886) 254; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 17.

Artocarpus camansi Blanco Fl. Filip. (1837) 670 (*Arctocarpus*), ed. 2 (1845) 467 (*Arctocarpus*), ed. 3, 3 (1879) 77, t. 457; F.-Vill. Novis. App. (1880) 202.

Artocarpus rima Blanco Fl. Filip. (1837) 671 (*Arctocarpus*), ed. 2 (1845) 467 (*Arctocarpus*), ed. 3, 3 (1879) 77, t. 267.

Rima Sonn. Voy. Nuov. Guin. (1876) 99, t. 57-60.

Northern Luzon to Mindanao, *Merrill Sp. Blancoanae 603, 760 (A. rima), 830 (A. camansi)*. In cultivation; the breadfruit. The seedless form was described by Blanco as *Artocarpus rima*, which is much less common than the seeded form, *A. camansi* Blanco. Polynesia; now cultivated in most tropical countries. Probably an introduced tree in the Philippines.

Local names: Bakák (If.); dalangían (Bis.); kamongsi (Tag., Bis.); kamansi (Tag.); pa-a (Is.); pakák (Ibn., Ilk., Sbl.); rimas (Tag.); úgub (Bik.).

ARTOCARPUS CUMINGIANA Tréc. in Ann. Sci. Nat. Bot. III 8 (1847) 119 (*cunningiana*); Miq. Fl. Ind. Bat. 1² (1858-59) 288; F.-Vill. Novis. App. (1880) 203; Vidal Phan. Cuming. Philip. (1885) 146; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 17, Philip. Journ. Sci. 1 (1906) Suppl. 43, Sp. Blancoanae (1918) 125; Elm. Leaf. Philip. Bot. 2 (1909) 620.

Artocarpus ovata Blanco Fl. Filip. (1837) 666, ed. 2 (1845) 464, ed. 3, 3 (1879) 74, t. 450; Vidal Rev. Pl. Vasc. Filip. (1886) 254, non Noronha.

Northern Luzon to Palawan and Mindanao. In forests at low and medium altitudes in most islands and provinces; often common. Endemic.

Local names: Anobión (Pamp.); anobling (Tag.); anóbung (Tag.); anúbung (Tag., Bik., Bis.); anubling (Tag.); bayúko (P. Bis.); buriuas (Tagb.); indáng (Tag.); kalauáhan (Bon.); kamandág (Neg.); kanabling (Bik.); kanét (Tag.); kanubling (Bik.); koliúng (Ting.); kubí (Bis., Tag.); obién (Ilk.); tugáp (Neg.); ubién (Ilk., Ibn.).

ARTOCARPUS ELASTICA Reinw. ex Blume Bijdr. (1825) 481; F.-Vill. Novis. App. (1880) 202; Koord. & Val. Bijdr. Boom. Java 11 (1906) 13.

Artocarpus blumei Tréc. in Ann. Sci. Nat. Bot. III 8 (1847) 111; Vidal Rev. Pl. Vasc. Filip. (1886) 254; Ceron Cat. Pl. Prov. Manila (1892) 160; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 17; Elm. Leaf. Philip. Bot. 2 (1909) 613.

Luzon (Tayabas to Sorsogon), Mindoro, Samar, Biliran, Mindanao, *B. S. 28855 Ramos & Edaño, 19284, 17596 Ramos, Merrill 2024*. In forests at low and medium altitudes. Malay Peninsula, Java, Borneo, Moluccas.

Local names: Antipólo (Tag., Bis.); gomihán (Bik.); gumihán (Bik.); tugúp (Bag., Mbo.).

ARTOCARPUS INTEGRa (Thunb.) Merr. Interpret. Herb. Amb. (1917) 190, Sp. Blancoanae (1918) 124.

Radermachia integra Thunb. in Vet. Akad. Handl. Stockh. (1776) 254.

Artocarpus integrifolia Linn. f. Suppl. (1781) 412; Blanco Fl. Filip. ed. 2 (1845) 466, ed. 3, 3 (1879) 76; Miq. Fl. Ind. Bat. 1² (1858-59) 287; F.-Vill. Novis. App. (1880) 203; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 17, Philip. Journ. Sci. 1 (1906) Suppl. 43, Fl. Manila (1912) 176; Elm. Leaf. Philip. Bot. 2 (1909) 612.

Artocarpus jaca Lam. Encycl. 3 (1789) 209.

Artocarpus philippensis Lam. Encycl. 3 (1789) 210; Willd. Sp. Pl. 4 (1805) 189.

Artocarpus heterophylla Lam. l. c.

Artocarpus maxima Blanco Fl. Filip. (1837) 669.

The jak fruit; cultivated throughout the Philippines at low and medium altitudes, in some regions spontaneous. Not a native of the Archipelago, but of prehistoric introduction from Malaya or tropical Asia. India to Malaya, now cultivated in most tropical countries.

Local names: Lángka (Ilk., Bis., Tag.); lánka (Tag., Bis.); náangka (Tag., Ibn., Bis., Sul.); nanka (Tag., Bis.).

ARTOCARPUS LAMELLOSA Blanco Fl. Filip. (1837) 667, ed. 2 (1845) 465, ed. 3, 3 (1879) 74; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 80, Sp. Blancoanae (1918) 124; Elm. Leaf. Philip. Bot. 2 (1909) 625 (*lamosella*).

Artocarpus nitida Tréc. in Ann. Sci. Nat. Bot. III 8 (1847) 119; F.-Vill. Novis. App. (1880) 203; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 254; Elm. Leaf. Philip. Bot. 2 (1909) 624.

Northern Luzon to Mindoro, Tablas, and Cebu, *Cuming 1078, B. S. 27283, 11022 Ramos, Merrill 4167, Sp. Blancoanae 100*. In thickets and forests at low and medium altitudes. Endemic.

Local names: Anóbing-kagiósing (Tag.); anúbing (Tag.); hamúgi (Bik.); kúbi (Tag., S. L. Bis.); lanusí (Ibn.); obien (Ilk., Pang.); pan-ganangkáus (Ilk.).

ARTOCARPUS LANCEOLATA Tréc. in Ann. Sci. Nat. Bot. III 8 (1847) 121; Miq. Fl. Ind. Bat. 1² (1858-59) 288; F.-Vill. Novis. App. (1880) 203; Vidal Rev. Pl. Vasc. Filip. (1886) 255; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 43; Elm. Leaf. Philip. Bot. 2 (1909) 624.

Artocarpus xanthocarpa Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 10, Philip. Journ. Sci. 1 (1906) Suppl. 43; Elm. Leaf. Philip. Bot. 2 (1909) 626.

Batan Islands southward to Mindoro and Siquijor, *B. S. 3581 Fénix, F. B. 682 Borden*. In forests at medium altitudes. Endemic.

Local names: Kubí (Tag., Bis.); mulní (Iv.); sulípa (Tag.).

ARTOCARPUS LEYTENSIS Elm. Leaf. Philip. Bot. 1 (1908) 279, 2 (1909) 622.

Artocarpus paloensis Elm. op. cit. 1 (1908) 280, 2 (1909) 621.

Leyte, Negros, Panay, Biliran, Mindanao, Palawan, *Elmer 7243, 7244, 12944, Wenzel 811, F. B. 17439 Curran, 26409 Franco, 23561 Vergara, B. S. 18663 McGregor, Merrill Phil. Pl. 1196* (as *A. rotundifolia* Elm.). In forests at low and medium altitudes. Endemic. Allied to *Artocarpus cumingiana* Tréc.

Local names: Bayúko (P. Bis.); kaluí (Bag.); kaluít (Bag.); kubí (P. Bis.); kubi-nangkáon (S. L. Bis.).

ARTOCARPUS NIGRESCENS Elm. Leaf. Philip. Bot. 2 (1909) 614.

Negros, Mindanao, *Elmer 9795*. From sea level to an altitude of 800 m. Endemic. Closely allied to *Artocarpus communis* Forst.

Local names: Atípu (Sul.); bíáu (Bag.); tagúp (C. Bis.).

ARTOCARPUS ODORATISSIMA Blanco Fl. Filip. (1837) 671, ed. 2 (1845) 647, ed. 3, 3 (1879) 78; F.-Vill. Novis. App. (1880) 203; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 80, Journ. Str. Branch Roy. As. Soc. 76 (1917) 80, *Sp. Blancoanae* (1918) 124.

Artocarpus tarap Becc. Nelle Foreste di Borneo (1902) 626.

Mindoro, Mindanao, Basilan, *Merrill Sp. Blancoanae 1018, 1019*. Apparently always planted; sea level to at least 800 m altitude. Borneo.

Local names: Loloi (Tag.); madáng (Lan.); maráng (Sul.); olói (Tag.); ulói (Mang.).

ARTOCARPUS OVATIFOLIA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 268.

Northern Luzon to Samar and Leyte, *F. B. 18566 Alvarez, 10164 Curran, B. S. 20530, 15040 Ramos, Merrill Phil. Pl. 1390, Elmer 15785* (*A. sorsogonensis* Elm.). The typical form with staminate inflorescences 2 to 3 cm long, the leaves usually entire. Endemic.

Var. **DOLICHOSTACHYS** var. nov.

A typo differt inflorescentiis ♂ cylindraceis, elongatis, usque ad 20 cm. longis, 6 mm diametro, foliis plerisque incisis, lobis utrinque 1 vel 2.

Samar, Leyte, *Merrill Phil. Pl. 1603* (type), *Elmer 7097*. In forests at low altitudes. Endemic.

ARTOCARPUS PINNATISECTA Merr. in *Philip. Journ. Sci.* 18 (1921) 50.

Luzon (Tayabas, Camarines), Mindanao (Davao), *B. S. 20789 Escritor, 33536 Ramos & Edaña, F. B. 27751 Cruz*. In forests at medium altitudes. Endemic.

Local names: Antipólo (Tag., Bik.); bió (Mbo.).

ARTOCARPUS RUBROVENIA Warb. in *Perk. Frag. Fl. Philip.* (1905)

166; Merr. in *Philip. Journ. Sci.* 1 (1906) Suppl. 43, 3 (1908) Bot. 401; *Elm. Leaf. Philip. Bot.* 2 (1909) 622.

Luzon (Cagayan to Sorsogon), Mindoro, Cagayan Sulu, *F. B. 14704 Darling, 2562, 2948, 2915 Borden, Phil. Pl. 1517 Merrill, Elmer 15598, 15785*. In forests at medium altitudes. Endemic.

Local names: Anabióng (Tag.); anabling (Bik.); anúbíng (Tag.); arutág (Iv.); bayúko (Bis.); búnga (Ibn.); hamigi (P. Bis.); haúmgoi (P. Bis.); kalúlot (Tag.); kilikíli (S. L. Bis.); kúbi (Bik., Tag., Bis.); obién (Pang.); tagáp (Tag.); tumolúbo (Klg.); ubién (Pang.); udién (Ig.).

ARTOCARPUS SUBROTUNDIFOLIA *Elm. Leaf. Philip. Bot.* 1 (1908) 281, 2 (1909) 619.

Southern Luzon (Sorsogon), Samar, Leyte, Mindanao, *Elmer 7265, 16990, F. B. 10541, 10542 Curran, 25774 Phasis, Merrill Phil. Pl. 1604*. In forests at medium altitudes. Endemic.

Local names: Bayúko (Bis.); burágit (Mbo.); kilikíli (S. L. Bis.); kúbi (Tag., Bis.); lokoán (Bik.).

ARTOCARPUS SUPERBA Becc. *Nelle Foreste di Borneo* (1902) 625; Merr. in *Philip. Journ. Sci.* 18 (1921) 51.

Palawan, Mindanao (Zamboanga), Basilan, *Merrill 8280, F. B. 3989 Hutchinson, 9164 Whitford & Hutchinson, 28009 Cenabre, Baldemor, & Aduviso*. In forests at medium altitudes. Borneo.

Local names: Bukágan (Tagb.); pikpikuág (Yak.).

ARTOCARPUS TRECULIANA *Elm. Leaf. Philip. Bot.* 2 (1909) 617.

Batan Islands to Negros, *Elmer 10406, F. B. 310, 685 Gammill, 1081 Clark, B. S. 3613, 4069 Fénié*. In thickets and forests at low and medium altitudes. Endemic. An ally of *Artocarpus communis* Forst., but with entire leaves.

Local names: Antipólo (Tag.); pakák (Ilk.); tipólo (Bis.); tipuhó (Iv.); tugóp (Bis.).

EXCLUDED SPECIES

ARTOCARPUS HYPARGYREA Hance; *F.-Vill. Novis. App.* (1880) 203.

ARTOCARPUS POLYPHEMA Pers.; *F.-Vill. op. cit.* 203.

The proper name for this is *Artocarpus champeden* (Lour.) Spreng. It has been recently introduced into the Philippines and is cultivated at Lamao.

13. *CASTILLOA* Cervantes

CASTILLOA ELASTICA Cerv. in Supl. Gaz. Lit. Mex. (1794) 7; Hook. f. in Trans. Linn. Soc. Bot. 2 (1886) 206; Merr. Fl. Manila (1912) 177.

The castilloa rubber tree, now occasionally cultivated in the Philippines. A native of tropical America.

14. *ANTIARIS* Leschenault

ANTIARIS TOXICARIA (Pers.) Lesch. in Ann. Mus. Paris 16 (1810) 478, t. 22; Benn. Pl. Jav. Rar. (1838) 52, t. 13; Hook. f. Fl. Brit. Ind. 5 (1888) 537; F.-Vill. Novis. App. (1880) 202; Vidal Sinopsis Atlas (1883) 40, t. 88, f. A (after Blume, Rumphia); Merr. in Philip. Journ. Sci. 2 (1907) Bot. 111.

Ipo toxicaria Pers. Syn. 2 (1807) 566.

Luzon (Cagayan, Apayao), Mindoro, Guimaras, *F. B. 17799 Curran, 21092 Connor, 28414 Fontanoza, B. S. 28224 Fénix, 1551 Bermejos*. In forests at low and medium altitudes; very local. The milky juice is used for poisoning arrows and spears. India to southern China and Malaya; the "deadly upas" tree.

Local names: Dálit (Tag.); ditá (Ibn., Ap.); lata (Neg.); manánau (S. L. Bis.); salógon (Tag.).

15. *FICUS* Tournefort

FICUS ADAMII Elm. Leaf. Philip. Bot. 4 (1911) 1258 (*adamsii*), 1521, 7 (1914) 2410.

Luzon (Apayao, Laguna, Bataan), Mindanao (Agusan, Davao), *Elmer 11177, 14029, 17863, 18284, B. S. 28100 Fénix, F. B. 20974 Villamil, 26373 Catalan, 22821 Diaz & Alambra, 28468 Salvosa*. In primary forests up to 1,000 m altitude. Endemic.

Local names: Baléte (Mbo.); okób (Bag.).

FICUS AHERNII Merr. in Philip. Journ. Sci. 18 (1921) 61.

Luzon (Rizal, Sorsogon), Biliran, Samar, *B. S. 18639 McGregor, 17512, 17568 Ramos, F. B. 3104 Ahern's collector, Elmer 17022, 14406*. In primary forests at low and medium altitudes. Endemic.

FICUS ALTISSIMA Blume Bijdr. (1825) 455; King in Ann. Bot. Gard. Calcutta 1 (1887) 30, t. 30, 31; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 17; Elm. Leaf. Philip. Bot. 4 (1911) 1243.

Luzon (Tayabas, Camarines), Alabat, Mindoro, Mindanao, *Merrill 1932, 10483, Ahern 172, 798, Whitford 1451, Clemens*. In primary forests at low and medium altitudes. India to the Malay Peninsula and Archipelago.

Local names: Baléte (Tag.); nonók (C. Bis.).

FICUS AMPELOS Burm. f. Fl. Ind. (1768) 226, excl. syn. Rheede; Miq. Fl. Ind. Bat. 1² (1858-59) 303; King in Ann. Bot. Gard. Calcutta 1 (1887) 90, t. 114; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 45, 3 (1908) Bot. 402; Elm. Leaf. Philip. Bot. 1 (1906) 191, 4 (1912) 1317, 1392, 7 (1914) 2405.

Batan Islands and northern Luzon to Palawan and Mindanao, *Elmer 12177, 17582, 13087, 15249*. Common in thickets and forests at low and medium altitudes. Sumatra to the Moluccas.

Local names: Aplás (Ibn.); baniakáu (Ilk.); bíli (P. Bis.); isís (Neg.); malaisís (Tag.); malauplí (Bik.); opli-gúbat (Tag.); palitík (Sul.); undái (Ibn.); uplás (Ilk.); uplí (Tag.); upling-gúbat (Tag.).

FICUS ANGUSTISSIMA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 11; Elm. Leaf. Philip. Bot. 1 (1907) 251, 4 (1911) 1255, 1317.

Luzon (Benguet, Tayabas, Rizal, Laguna, Sorsogon), Sibuyan, Mindanao, Merrill 2696, Williams 1291, Elmer 9357, 16101, 13920, B. S. 21986 Ramos, 23097 McGregor. In thickets at low altitudes. Endemic.

Local names: Isis-máya (Tag.); laninging (Tag.); lortís (P. Bis.); ropít (Bag.).

FICUS ANTONIANA Elm. Leaf. Philip. Bot. 4 (1912) 1374.

Palawan, Jolo, Elmer 12831, Wester 31. Epiphytic on large trees at low and medium altitudes. Endemic.

Local name: Hunók (Sul.).

FICUS APIOCARPA Miq. in Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 269, 289; King in Ann. Bot. Gard. Calcutta 1 (1887) 70, t. 92; Elm. Leaf. Philip. Bot. 1 (1907) 249, 2 (1908) 539 (*piocarpa*).

Urostigma apiocarpa Miq. Fl. Ind. Bat. Suppl. (1860-61) 440.

Luzon (Batangas, Tayabas, Camarines, Sorsogon), Elmer 7445, 16116 (*F. peninsularis* Elm.), B. S. 22200, 23331 Ramos, F. B. 28055 Mabesa. In forests at medium altitudes. Malay Peninsula and Archipelago.

Local name: Apgíd (Bik.).

FICUS APPENDICULATA Merr. in Philip. Journ. Sci. 18 (1921) 57.

Samar, Mindanao (Surigao), B. S. 24429 Ramos, 34465 Ramos & Pascasio, Sablaya 1. In damp forests at low altitudes. Endemic.

Local names: Tubóg (S. L. Bis.); tuyokái-na-digtói (S. L. Bis.).

FICUS AREOLATA Elm. Leaf. Philip. Bot. 4 (1911) 1252.

Mindanao (Lanao, Davao), Elmer 10475, Clemens. In forests up to 1,200 m. Endemic.

Local names: Kataúpi (Bag.); píli (Mbo.).

FICUS ARGENTEA Blanco Fl. Filip. (1837) 681, ed. 2 (1845) 473, ed. 3, 3 (1879) 84; Merr. Sp. Blancoanae (1918) 129, Philip. Journ. Sci. 20 (1922) 368, descr.!

Ficus polycarpa F.-Vill. Novis. App. (1880) 200, non Roxb.

Luzon (Bataan, fide Blanco), Mindoro, B. S. 39732 Ramos. In dry forests at low altitudes. Endemic.

FICUS BAKERI Elm. Leaf. Philip. Bot. 7 (1914) 2402.

Luzon (Laguna, Sorsogon), Mindanao, B. S. 24065 Ramos, F. B. 21379 Villamil, 26439 Catalan, 28467 Salvosa, Elmer 14062, 16804, 17730, 16114. In damp forests, altitude 500 to 1,100 m. Endemic.

Local name: Katáupi (Mbo.).

FICUS BALETE Merr. in Philip. Journ. Sci. 18 (1921) 55.

Luzon (Cagayan, Zambales, Tayabas, Rizal, Laguna, Camarines), Mindoro, Panay, Merrill 1732, 2931, 2041, 2033, B. S. 26878 Edaña, 20869 Escritor, 22246, 39719 Ramos, Elmer 18266. In forests at low and medium altitudes. Endemic.

Local names: Baléte (Tag., Bik.); baléte-pulá (Tag.); baléting-payápa (Tag.); pupútut (Sbl.).

FICUS BANAHAESENSIS Elm. Leaf. Philip. Bot. 1 (1907) 252, 4 (1911) 1254.

Ficus camiguinensis Merr. in Philip. Journ. Sci. 9 (1914) Bot. 276.

Luzon (Tayabas) Catanduanes, Samar, Leyte, Camiguin de Misamis, Bucas Grande, Mindanao (Bukidnon), *Elmer* 7479, 7895, *Merrill Phil. Pl.* 1197, 1602, *B. S.* 28743, 39157, 38825, 38588 *Ramos & Edaño*, 19519, 24365, 24469, 30372 *Ramos*, *Wenzel* 1136, 1051, 1014, 528. In forests at medium altitudes. Endemic.

Local names: Banákal (Bag.); kátol (S. L. Bis.); laglág (S. L. Bis.); moráu (S. L. Bis.); tangkulábas (Buk.).

FICUS BARNESII Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 12, Philip. Journ. Sci. 1 (1906) Suppl. 46; Elm. Leaf. Philip. Bot. 1 (1906) 58, 198, (1907) 256, 7 (1912) 2391.

Luzon (Benguet, Nueva Vizcaya, Tayabas, Pangasinan, Pampanga, Rizal, Bataan, Laguna), Mindoro, Panay, Samar, Leyte, Mindanao. In forests at low and medium altitudes; closely allied to *Ficus conora* King. Endemic.

Local names: Basikóng (Mbo.); tagkulábas (Buk.); tibíg (Tag.).

FICUS BATAANENSIS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 46; Elm. Leaf. Philip. Bot. 2 (1908) 536.

Luzon (Ilocos Norte, Abra, Nueva Vizcaya, Bataan, Rizal, Laguna, Camarines), Palawan, Negros. In forests at medium altitudes, but more often on exposed forested ridges up to 1,500 m altitude. Endemic.

FICUS BENGUETENSIS Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 10; Elm. Leaf. Philip. Bot. 1 (1906) 54, 191, (1907) 250.

Ficus benguetensis Merr. var. *leytensis* Elm. Leaf. Philip. Bot. 1 (1906) 194, (1907) 250.

Ficus benguetensis Merr. var. *negrosensis* Elm. op. cit. 2 (1908) 542.

Ficus urdanetensis Elm. op. cit. 7 (1914) 2413.

Northern Luzon to Leyte, Samar, Negros, and Mindanao. In forests and thickets from near sea level to an altitude of 1,800 m; common. Endemic.

Local names: Hauili (Neg.); labái (Ig.); labéi (Bon.); sabúl (Ig.); tabóg (Mbo.); tabúgai (C. Bis.); tábul (Ig.); tankalibás (Buk.); tayúkai (S. L. Bis.); taguiutan (Mang.); uplít (Tag.).

FICUS BENJAMINA Linn. Mant. 1 (1767) 129; F.-Vill. Novis. App. (1880) 199; Vidal Sinopsis Atlas (1883) 39, t. 87, f. B, Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 251; King in Ann. Bot. Gard. Calcutta 1 (1887) 43, t. 52; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 46, Fl. Manila (1912) 175; Elm. Leaf. Philip. Bot. 1 (1906) 48.

Ficus haematocarpa Blume ex Decne. in Nuov. Ann. Mus. Paris 3 (1834) 494; F.-Vill. Novis. App. (1880) 200.

Urostigma haematocarpum Miq. in Hook. Lond. Journ. Bot. 6 (1847) 584, Fl. Ind. Bat. 1² (1858-59) 346.

Urostigma benjaminum Miq. in Hook. Lond. Journ. Bot. 6 (1847) 583, Fl. Ind. Bat. 1² (1858-59) 346.

Northern Luzon to Mindanao, in most islands and provinces, *Cuming* 1936, *Wenzel* 447, 1441, *Elmer* 14975, *Merrill* 4187, *B. S.* 11154, 32519 *McGregor*, 22655 *Ramos & Deroy*, *F. B.* 23093 *Guerrero*, 8577, 9693 *Merritt*,

26385 Catalan. In primary forests at low and medium altitudes. India to southern China and Malaya.

Very many of the Philippine collections distributed as this species are referable to *Ficus nuda* Miq.

Local names: Baléte (Ilk., Tag.); salísi (Is.).

FICUS BINUANGENSIS Merr. in Philip. Journ. Sci. 18 (1921) 67.

Luzon (Tayabas, east coast), *B. S.* 28831 *Ramos & Edaño*. In forests at low altitudes. Endemic.

FICUS BLEPHAROSTOMA Warb. in Perk. Frag. Fl. Philip. (1905) 197.

Luzon (Cagayan, Apayao, Ilocos Norte, Benguet, Nueva Vizcaya, Tayabas, Bulacan, Bataan, Laguna, Camarines). In thickets at low and medium altitudes; intergrades with *Ficus ulmifolia* Lam. Endemic.

Local names: Apá (Ibn.); aplás (Ibn., Ilk.); oplás-gránde (Ilk.); piuis (Ibn.); tagáta (Ibn.); uplás (Ilk.).

FICUS BORDENII Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 11, Philip. Journ. Sci. 1 (1906) Suppl. 46.

Luzon (Bataan), *For. Bur.* 1211 *Borden*. In forests, altitude 650 m. Endemic.

FICUS BRUNNEA Merr. in Philip. Journ. Sci. 18 (1921) 56.

Samar, Mindanao (Bukidnon), *B. S.* 24338 *Ramos*, 38972 *Ramos & Edaño*, *Merrill Phil. Pl.* 1605. On forested slopes at low altitudes. Endemic.

FICUS CALOPHYLLOIDES Elm. Leaf. Philip. Bot. 4 (1911) 1246.

Luzon (Rizal, Laguna, Bataan, Tayabas, Camarines, Sorsogon), Negros, Mindanao, *Elmer* 11921, 17794, 17107; *Merrill* 9773, *Williams* 2882, *For. Bur.* 2427, 2479 *Borden*. In forests at low and medium altitudes. Endemic, but to be compared with the Javan *Ficus stricta* Miq.

Local names: Baléte (Tag.); marobútum (Bag.); tibi (Bik.).

FICUS CAMARINENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 269.

Luzon (Laguna, Camarines), Samar, *Merrill Phil. Pl.* 1457, *Elmer* 18404, *B. S.* 24357 *Ramos*, *F. B.* 27027 *Mabesa*, *Sablaya* 103. In primary forests at low and medium altitudes. Endemic.

Local names: Baléte (Bik., Tag.); malapapangión (S. L. Bis.).

FICUS CARDINALICARPA Elm. Leaf. Philip. Bot. 4 (1912) 1391.

Palawan, *Elmer* 12875, 12876. In thickets at low altitudes; closely allied to *Ficus pustulata* Elm. Endemic.

FICUS CARICA Linn. Sp. Pl. (1753) 1059; F.-Vill. Novis. App. (1880) 200.

The common fig, occasionally cultivated in gardens; Cagayan, Nueva Vizcaya, Manila, etc.

FICUS CARPENTERIANA Elm. Leaf. Philip. Bot. 1 (1906) 197, 4 (1911) 1256, 7 (1914) 2414.

Leyte, Samar, Mindanao, Bucas Grande, Basilan, *Elmer* 7177, 13261, 11081, *Williams* 2163, *Merrill* 8177, *Wenzel* 1603, 1889, *B. S.* 24124, 17530, 24433 *Ramos*, 35129, 34789, 34395 *Ramos & Pascasio*. In forests at low and medium altitudes. Endemic.

Local names: Sangi (Bag.); tabog (Mbo.); tuyokái (S. L. Bis.).

FICUS CASSIDYANA Elm. Leaf. Philip. Bot. 1 (1906) 200, 4 (1911) 1265, 7 (1914) 2393.

Negros, Samar, Biliran, Mindanao, *Elmer* 7169, 11225, 13809, *Merrill* 8133, *Phil. Pl.* 1678, *B. S.* 24428 *Ramos*, 18889 *McGregor*, 34370 *Ramos & Pascasio*, 36576 *Ramos & Edaño*. In thickets and forests at low and medium altitudes. Endemic.

Local names: Basíkong (Bag.); dakabkabán (Mbo.); tambón (Sul.); tubóg (S. L. Bis.); tuyukái-na-dako (S. L. Bis.); uuangan (S. L. Bis.).

FICUS CATAUPI Elm. Leaf. Philip. Bot. 4 (1911) 1251, 7 (1914) 2387.

Mindanao (Agusan, Bukidnon, Davao), *Elmer* 11822, 14211, *B. S.* 38467 *Ramos & Edaño*. On exposed forested ridges, altitude about 1,350 m. Endemic.

Local names: Kataúpi (Bag, Mbo.); sigíd (Buk.).

FICUS CAUDATIFOLIA Warb. in *Perk. Frag. Fl. Philip.* (1905) 194; Elm. Leaf. Philip. Bot. 1 (1907) 240, 2 (1908) 534, 4 (1911) 1241; Merr. in *Philip. Journ. Sci.* 3 (1908) Bot. 402.

Ficus urophylla F.-Vill. *Novis. App.* (1880) 201; Naves in Blanco *Fl. Filip.* ed. 3 (1877-83) *t.* 255, non Wall.

Ficus eucaudata Elm. Leaf. Philip. Bot. 1 (1906) 46.

Ficus radicans Miq. in *Hook. Lond. Journ. Bot.* 7 (1848) 428, quoad *Philip., Fl. Ind. Bat.* 1² (1858-59) 306, quoad *Philip.; Vidal Phan. Cuming. Philip.* (1885) 145, *Rev. Pl. Vasc. Filip.* (1886) 252, non Roxb.

Ficus rostrata Rolfe in *Journ. Bot.* 23 (1885) 215; *Vidal Phan. Cuming. Philip.* (1885) 145, *Rev. Pl. Vasc. Filip.* (1886) 251; Merr. in *Philip. Journ. Sci.* 1 (1906) *Suppl.* 45, non Roxb.

Batan and Babuyan Islands and northern Luzon to Mindanao. Common in thickets and forests at low and medium altitudes, ascending to 1,500 m. Endemic.

Local names: Alintábau (Iv.); isís-máya (Tag.); magamómau (Bag.); magulipít (Bag.); malaisís (Tag.); malanlibás (S. L. Bis.); obdás (Ig.); upling-gúbat (Tag.).

FICUS CELEBICA Blume *Bijdr.* (1825) 461; *Miq. Fl. Ind. Bat.* 1^a (1858-59) 313; *King in Ann. Bot. Gard. Calcutta* 1 (1887) 12, *t.* 10; Elm. Leaf. Philip. Bot. 1 (1906) 44, 4 (1911) 1239, (1912) 1384.

Ficus lancifolia Miq. in *Hook. Lond. Journ. Bot.* 7 (1848) 452, *Fl. Ind. Bat.* 1² (1858-59) 304; F.-Vill. *Novis. App.* (1880) 200; *Vidal Phan. Cuming. Philip.* (1885) 145, *Rev. Pl. Vasc. Filip.* (1886) 253.

Ficus acuminatissima Miq. in *Hook. Lond. Journ. Bot.* 7 (1848) 233, *Fl. Ind. Bat.* 1² (1858-59) 303, *Ann. Mus. Bot. Lugd.-Bat.* 3 (1867) 292; F.-Vill. *Novis. App.* (1880) 200; *Vidal Phan. Cuming. Philip.* (1885) 145, *Rev. Pl. Vasc. Filip.* (1886) 253.

Northern Luzon to Palawan and Mindanao. Common in thickets and forests at low and medium altitudes, ascending to 1,500 m. Malay Peninsula, Celebes, New Guinea.

King placed the Philippine *Ficus acuminatissima* Miq. as a synonym of *Ficus pisifera* Wall., which does not appear to be the correct disposition of it; K. Schumann considers it a distinct species.

Local names: Magulípid (Bag.); maladalíket (S. L. Bis.); malaisís (Tag.); takines (Tag.).

FICUS CELTOIDES Elm. Leaf. Philip. Bot. 4 (1912) 1388.

Luzon (Sorsogon), Biliran, Mindoro, Bohol, Mindanao, Mindoro, Palawan, *Elmer 12796, 17046, B. S. 23709 Ramos, 542 Foxworthy, 18792, 18629 McGregor, Merrill 9577*. In thickets and forests at low altitudes; closely allied to *Ficus ulmifolia* Lam. Endemic.

Local name: Padi (Tagb.).

FICUS CERVINA Elm. Leaf. Philip. Bot. 2 (1908) 543.

Negros, *Elmer 10179*, on steep forested slopes, altitude about 1,050 m. Endemic.

FICUS CLEMENTIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 130; Elm. Leaf. Philip. Bot. 4 (1911) 1244.

Luzon (Cagayan, Laguna, Bataan, Rizal, Tayabas, Camarines, Sorsogon), Panay, Mindanao, Basilan, *Clemens 703, B. S. 33827 Ramos & Edaño, 19495 Ramos, Merrill 1935, Phil. Pl. 1004, Elmer 17743, 15259 (F. crassicalyx Elm.)*. In forests at low and medium altitudes. Endemic.

Local names: Baléte (Bik., Tag.); marárag (Bag.); nonók (C. Bis.).

FICUS CLUSIOIDES Miq. in Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 286; F.-Vill. Novis. App. (1880) 199; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 250; King in Ann. Bot. Gard. Calcutta 1 (1887) 42, *t. 50*; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 18; Elm. Leaf. Philip. Bot. 4 (1912) 1380.

Urostigma clusioides Miq. in Hook. Lond. Journ. Bot. 6 (1847) 579, Fl. Ind. Bat. 1² (1858-59) 340.

Ficus everettii Elm. Leaf. Philip. Bot. 2 (1908) 538, 7 (1914) 2394.

Northern Luzon to Mindanao, *Cuming 1929, B. S. 6373 Robinson, 21141 Escritor, Elmer 12765, 15901, 14064, 10254*. Occasional in forests at low and medium altitudes. Endemic. *Koorders 19126!* from Celebes reported as this species is entirely different.

Local names: Baléte (Tag., Bik.); basála (Ig.); nonók (Sul.).

FICUS CONCINNA Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 286; F.-Vill. Novis. App. (1880) 199; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 251; Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t. 382*; Merr. Fl. Manila (1912) 176.

Urostigma concinnum Miq. in Hook. Lond. Journ. Bot. 6 (1847) 570, Fl. Ind. Bat. 1² (1858-59) 343.

Ficus glabella Blume var. *concinna* King in Ann. Bot. Gard. Calcutta 1 (1887) 50.

Ficus arayatsensis Warb. in Perk. Frag. Fl. Philip. (1905) 196.

Ficus glabella Vidal Rev. Pl. Vasc. Filip. (1886) 251; Ceron Cat. Pl. Herb. Manila (1892) 158; Elm. Leaf. Philip. Bot. 1 (1906) 48, non Blume.

Ficus parvifolia Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 286; F.-Vill. Novis. App. (1880) 199; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 251.

Urostigma parvifolium Miq. in Hook. Lond. Journ. Bot. 6 (1847) 570, Fl. Ind. Bat. 1² (1858-59) 343.

Northern Luzon to Palawan and Mindanao, scattered in thickets and forests at low and medium altitudes. Endemic; some forms approach *Ficus infectoria* Roxb.

Local names: Agáin (Bon.); baléte (If., Tag.) pasaplá (Ilk.).

FICUS CONFERTIFOLIA Merr. in Philip. Journ. Sci. 18 (1921) 59.

Luzon (Nueva Ecija), *B. S. 26307 Ramos & Edaño*. In the mossy forest, altitude about 1,000 m. Endemic.

FICUS CONORA King in Ann. Bot. Gard. Calcutta 1 (1888) 103, t. 131; Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 15; Elm. Leaf. Philip. Bot. 4 (1912) 1376 (*corona*).

Ficus endotherix Warb. in Perk. Frag. Fl. Philip. (1905) 200.

Ficus subalbidoramea Elm. Leaf. Philip. Bot. 7 (1914) 2389.

Mindanao, Palawan, *Elmer 13085, 13991, Ahern 683, B. S. 34531 Ramos & Pascasio*. In forests at low altitudes. Amboina, Ternate, New Guinea. Local name: Basikong (Mbo.).

FICUS COPELANDII C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 176; Elm. Leaf. Philip. Bot. 4 (1912) 1385.

Palawan, Mindanao, *Copeland 1606, 1637, Elmer 12830, Williams 2097, 2151, Ahern 544*. In thickets along streams at low altitudes.

FICUS CORDATULA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 131.

Mindanao (Lanao), *Clemens 1089*. On forested lake margin, altitude about 750 m. Endemic.

FICUS CRININERVIA Miq. Fl. Ind. Bat. Suppl. (1860-61) 175, 432; King in Ann. Bot. Gard. Calcutta 1 (1888) 138, t. 173; Merr. in Philip. Journ. Sci. 18 (1921) 69.

Basilan, *B. S. 15425 Reillo*. In forests. Assam to New Guinea.

FICUS CUERNOSENSIS Elm. Leaf. Philip. Bot. 2 (1908) 545, 4 (1911) 1265.

Ficus maquilingensis Elm. op. cit. 8 (1919) 3094.

Luzon (Camarines, Laguna, Nueva Ecija), Mindoro, Biliran, Negros, Panay, Siargao, Camiguin de Misamis, Mindanao, *Elmer 9496, 10717, 17854, Baker 2797, B. S. 26338, 33832 Ramos & Edaño, 34888 Ramos & Pascasio, 18886 McGregor, 39666, 39801 Ramos*. In forests at low and medium altitudes, ascending to 1,400 m. Endemic.

Local names: Basikong (Bag.); tabóg (Bik.); tabúgai (C. Bis.); túbog (Tag.); túbog (Buk.).

FICUS CUMINGII Miq. in Hook. Lond. Journ. Bot. 7 (1848) 232, Fl. Ind. Bat. 1² (1858-59) 301, Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 292; F.-Vill. Novis. App. (1880) 200; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 253; King in Ann. Bot. Gard. Calcutta 1 (1887) 92, t. 118; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 18, Philip. Journ. Sci. 5 (1910) Bot. 342, Fl. Manila (1912) 174; Elm. Leaf. Philip. Bot. 1 (1906) 53, 7 (1914) 2404.

Ficus multiramea Elm. Leaf. Philip. Bot. 4 (1911) 1259.

Ficus terminalifolia Elm. op. cit. 4 (1911) 1318.

Throughout the Philippines in thickets at low and medium altitudes; intergrading with *Ficus ulmifolia* Lam. and *F. angustissima* Merr. Endemic.

Local names: Agosíhis (Mbo.); agupít (Bik., Sul.); agusáhis (C. Bis.); akokósi (Ibn.); ápas (Bon.); apúlas (Ilk.); biríg (C. Bis.); gusáhis (Buk.); hagósis (C. Bis.); hagupít (Sul.); isís (Tag.); isís-na-putí (Tag.); isít (Ibn.); lainging (Bis.); maramai (Bag.).

FICUS CURRANII Merr. in Philip. Journ. Sci. 5 (1910) Bot. 343.

Luzon (Benguet, Bontoc, Lepanto, Abra, Camarines), Panay. In the mossy forest on the higher mountains, and in ravines at low altitudes; perhaps not specifically distinct from *Ficus lucbanensis* Elm. Endemic.

Local names: Dieudiéu (Ig.); labso (Ig.); lapsú (Ig.); liulú (Ig.); tarúbog (Bik.); tebé (Ig.).

FICUS DISTICHA Blume Bijdr. (1825) 458; F.-Vill. Novis. App. (1880) 201; King in Ann. Bot. Gard. Calcutta 1 (1888) 126, t. 160; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 253; Elm. Leaf. Philip. Bot. 2 (1908) 546, 4 (1911) 1262, 7 (1914) 2388.

Luzon (Rizal, Laguna), Palawan, Camiguin de Misamis, Negros, Mindanao, Merrill 9539, Phil. Pl. 1285, Elmer 13848, 10901, 10051, 10429, Loher 6918, B. S. 29616 Ramos & Edaño, 30382 Ramos. In the mossy forest on exposed ridges and peaks, altitude 1,000 to 2,000 m. Java, Sumatra.

Local names: Kabinsál (Bag.); pángul (Mbo.).

FICUS EDAÑOII Merr. in Philip. Journ. Sci. 18 (1921) 62.

Luzon (Tayabas, east coast), B. S. 29130 Ramos & Edaño. Spreading in forests at low altitudes. Endemic.

FICUS ELLIPTIFOLIA Merr. in Philip. Journ. Sci. 18 (1921) 53.

Mindanao (Zamboanga), Copeland, F. B. 9309 Whitford & Hutchinson. In forests at low altitudes. Endemic.

FICUS ELASTICA Roxb. Hort. Beng. (1814) 65, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 541; King in Ann. Bot. Gard. Calcutta 1 (1887) 45, t. 54; Merr. Fl. Manila (1912) 175.

Planted for ornamental purposes in Manila and other large towns; introduced from British India. Pantropic in cultivation.

FICUS ELMERI Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 9; Elm. Leaf. Philip. Bot. 1 (1906) 55.

Luzon (Benguet), Elmer 6043. In thickets, altitude about 1,300 m. Endemic.

FICUS EUPHLEBIA Merr. in Philip. Journ. Sci. 8 (1913) 364.

Panay, Leyte, Wenzel 52, 194, B. S. 30945, 31369, 31029, 31067 Ramos & Edaño. In thickets and forests at low and medium altitudes; an ally of *Ficus ulmifolia* Lam. Endemic.

FICUS FALCATA Thunb. Ficus (1786) 8; Vidal Sinopsis Atlas (1883) 40, t. 87, f. C; F.-Vill. Novis. App. (1880) 201; Usteri Beitr. Ken. Philip. Veg. (1905) 127.

Ficus punctata Thunb. op. cit. 9; King in Ann. Bot. Gard. Calcutta 1 (1888) 68, t. 88, 89.

Luzon (Laguna), Palawan, Mindanao (Lanao), *F. B. 20971 Villamil, Clemens*. On trees in primary forests, altitude 300 to 800 m. Malay Peninsula and Archipelago.

FICUS FASTIGIATA Elm. Leaf. Philip. Bot. 1 (1906) 44, (1907) 240; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 342.

Luzon (Benguet, Abra, Zambales), *Elmer 6072, 6063, 14284, 8001, Merrill Phil. Pl. 769, B. S. 5582 Ramos, F. B. 10822 Curran*. In thickets and forests, altitudes 1,400 to 1,800 m. Endemic.

Local names: Obdás (Ig.); opdás (Ig.).

FICUS FENICIS Merr. in Philip. Journ. Sci. 18 (1921) 66.

Mindanao (Bukidnon), *B. S. 26097 Fénix*. Growing over rocks on open slopes. Endemic.

FICUS FISKEI Elm. Leaf. Philip. Bot. 1 (1906) 195, 2 (1908) 540, 7 (1914) 2405; Merr. in Philip. Journ. Sci. 18 (1921) 68.

Luzon (Ilocos Norte, Tayabas, Rizal, Laguna, Camarines, Sorsogon), Pillo, Samar, Leyte, Cebu, Mindanao, *Elmer 7324, 7304, 7185, 13315, B. S. 1119, 4643, 5207, 13745, 19551, 22159, 23401, 24503 Ramos, 6929, 6052 Robinson, F. B. 10547 Curran, 1708 McGregor*. In thickets and forests at low and medium altitudes. Endemic.

Local names: Hagupit (Bik., S. L. Bis.); isís (Tag.); oplás (If.); perái (Mbo.); upláng gúbat (Tag.).

Var. **CEBUENSIS** Merr. in Philip. Journ. Sci. 18 (1921) 68.

Luzon (Sorsogon), Cebu, *B. S. 11086 Ramos, Elmer 16425*. In thickets.

Var. **LAEVIFOLIA** Merr. op. cit. 69.

Siargao, *B. S. 34967, 35030 Ramos & Pascasio*. In thickets or forests.

FICUS FLAVO-CORTICA Elm. Leaf. Philip. Bot. 4 (1911) 1241, 7 (1914) 2399.

Luzon (Sorsogon), Leyte, Mindanao (Lanao, Davao, Agusan), *Elmer 10922, 13381, 15954, Clemens 936, 998, Wenzel 713*. In forests, altitude 350 to 1,100 m. Endemic.

Local names: Agópíd (Mbo.); magulípi (Bag.).

FICUS GARCIAE Elm. Leaf. Philip. Bot. 2 (1908) 550, 4 (1912) 1384, 7 (1914) 2395.

Ficus glomerata Elm. op. cit. 1 (1907) 260, non Roxb.

Luzon (Abra, Benguet, Bataan, Rizal, Laguna, Tayabas), Mindoro, Palawan, Panay, Negros, Camiguin de Misamis, Mindanao (Agusan), *Elmer 8835, 9486, 9379, 12846, 13380, Merrill Phil. Pl. 1094, 1331, B. S. 31174, 39515 Ramos*. In forests at low and medium altitudes. Endemic.

Local names: Agáhon (Mbo.); talo-ót (C. Bis.).

FICUS GIGANTIFOLIA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 9; Elm. Leaf. Philip. Bot. 1 (1907) 259, 7 (1914) 2407.

Luzon (Tayabas), Burias, Samar, Mindanao, *Ahern 392, 606, Elmer 3360, 13384, Williams 2422, B. S. 24347 Ramos, F. B. 24236 Duldulao, 1738 Clark*. In forests at low and medium altitudes. Endemic.

Local names: Bulbanéra (Tag.); lakbángan (Mbo.); malapapanngiön (S. L. Bis.); marang-maráng (Sul.); talitígang (Bik.).

FICUS GLAREOSA Elm. Leaf. Philip. Bot. 4 (1912) 1393.

Palawan, *Elmer 13736, 12986, 13115*. In forests and thickets at low and medium altitudes. Endemic.

FICUS GRANDIDENS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 271.

Mindanao (Zamboanga), *Merrill 8089*. In forests, altitude about 800 m. Endemic.

FICUS GUYERI Elm. Leaf. Philip. Bot. 1 (1906) 194, 250, 2 (1908) 540, 4 (1911) 1256.

Ficus validicaudata Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 45.

Luzon (Ifugao and Benguet) southward to Mindanao, in forests and thickets at medium altitudes, ascending in some regions to 2,400 m. Endemic.

Local names: Agupíli (Buk.); apas (Ig.); apúlas (Ilk.); diagaring (Bag.); pili (C. Bis.); uplás-á-babasít (Ilk.); uptás (Ig.).

FICUS HAGGERI Merr. in Philip. Journ. Sci. 18 (1921) 62.

Luzon (Cagayan, Laguna, Tayabas, Camarines), Leyte, *Wenzel 1230, Merrill 2009, F. B. 26036 Mabesa, 28075 Alambra, 28425 Zschokke*. In primary forests at low altitudes. Endemic.

Local names: Opli (Tag.); tigilik (Bik.).

FICUS HALLIERI Merr. ex Elm. Leaf. Philip. Bot. 2 (1908) 536, 4 (1911) 1243; Merr. in Philip. Journ. Sci. 18 (1921) 54.

Mindanao (Zamboanga, Surigao, Davao), *Hallier, Elmer 11080, B. S. 34357 Ramos & Pascasio*. In forests at low and medium altitudes.

Local name: Mararag (Bag.).

FICUS HAULI Blanco Fl. Filip. (1837) 684; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 45, 2 (1907) Bot. 270, 3 (1908) Bot. 402, 5 (1910) Bot. 342, Fl. Manila (1912) 175, Sp. Blancoanae (1918) 127; Elm. Leaf. Philip. Bot. 1 (1906) 53, 191, 250, 2 (1907) 250, 541, 4 (1911) 1253, 1316, 1395.

Ficus laccifera Blanco Fl. Filip. (1837) 673, ed. 2 (1845) 468, ed. 3, 3 (1879) 80, non Roxb.

Ficus leucopleura F.-Vill. Novis. App. (1880) 202, Vidal Sinopsis Atlas (1883) 40, t. 87, f. D, non Blume.

Ficus radiata F.-Vill. Novis. App. (1880) 202, non Deene.

Ficus leucantatoma Merr. in Philip. Bureau Forest. Bull. 1 (1903) 18, non Poir.

Ficus philippinensis Bonard ex Hérincq Hort. Franc (1869) 244.

Ficus didymophylla Warb. in Perk. Frag. Fl. Philip. (1905) 200.

Ficus rapiformis Rolfe in Journ. Bot. 23 (1885) 215; Vidal Phan.

Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 145;

Usteri Beitr. Ken. Philip. Veg. (1895) 127, non Roxb.

Ficus altimeraloo F.-Vill. Novis. App. (1880) 201; Vidal Rev. Pl. Vasc. Filip. (1886) 252, non Roxb.

Throughout the Philippines in thickets at low and medium altitudes; common. Our representative of *Ficus leucantatoma* Poir. = *F. septica* Burm. f. Endemic unless referable to the latter.

Local names: Auili (Tag.); diudíu (Ig.); hauili (Tag.); kauili (Tag.); labnóg (P. Bis.); labnúg (C. Bis., P. Bis.); lagmút (P. Bis.); laptíng (Ilk.); latáyí (Bag.); lilíau (Ibn.); lio-lio (Pang.); liu-liu (Ting., If.,

Bon., Ilk.); raya-ráya (Ilk.); reya-réya (Ilk.); riá-ria (Ilk.); sió (Bik.); tábung (Sul.); tulíao (Ibn.); yabnói (Iv.).

FICUS HEMICARDIA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 275.

Mindanao (Butuan), *Weber 1001, B. S. 15886 Fénix*. In forests at low altitudes. Endemic.

FICUS HETEROPODA Miq. in Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 232, 296; King in Ann. Bot. Gard. Calcutta 1 (1888) 78, *t. 96*; Elm. Leaf. Philip. Bot. 1 (1906) 193, 2 (1908) 543, 4 (1911) 1321, (1912) 1377.

Ficus deccussata Warb. in Perk. Frag. Fl. Philip. (1905) 198.

Ficus anomala Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 183; Elm. Leaf. Philip. Bot. 1 (1907) 241, 2 (1908) 535.

Luzon (Cagayan, Tayabas, Pampanga, Rizal, Camarines, Sorsogon), Mindoro, Palawan, Leyte, Negros, Mindanao. In thickets and forests at low and medium altitudes. Halmaheira, ? Celebes.

Local names: Alal-lagát (Ibn.); alangas (C. Bis.); isiis (Bik.); mañg-impít (Sub.); talóbog (P. Bis.).

FICUS HISPIDULOSA Elm. Leaf. Philip. Bot. 7 (1914) 2401.

Samar, Mindanao (Agusan), *Elmer 13328, B. S. 24332 Ramos*. In forests at medium altitudes; closely allied to the Moluccan *Ficus aurita* Reinw. Endemic.

Local name: Dilásit (Mbo.).

FICUS INDICA Linn. Sp. Pl. (1753) 1060; Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 263; F.-Vill. Novis. App. (1880) 199; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 251; King in Ann. Bot. Gard. Calcutta 1 (1887) 39, *t. 45, 83b*; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 17, Philip. Journ. Sci. 1 (1906) Suppl. 47, Fl. Manila (1912) 175; Elm. Leaf. Philip. Bot. 1 (1906) 49, 243, 2 (1908) 536, 4 (1911) 1243, 1314.

Urostigma tjiela Miq. in Hook. Lond. Journ. Bot. 6 (1847) 580.

Throughout the Philippines at low and medium altitudes; one of the commonest strangling figs in the Archipelago. This interpretation of the Linnean species follows King l. c. Assam and Burma to Malaya and the Philippines.

Local names: Agáien (Bon.); baléte (Ibn., Tag.); baléting-báging (Tag.); baléting-ibon (Tag.); gudúgud (If.); isip (Bon.); kamanlingau (Sbl.); kayápa (Ibn.); marobutum (Bag.); nonók (C. Bis., Sul.).

Var. **GELDERI** (Miq.) King in Ann. Bot. Gard. Calcutta 1 (1887) 39, *t. 45*; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 17; Elm. Leaf. Philip. Bot. 1 (1907) 243, 4 (1912) 1379.

Ficus gelderi Miq. in Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 216, 287.

Palawan, *Merrill 9245, Elmer 12728*. Malay Peninsula and Archipelago.

FICUS INTEGRIFOLIA Elm. Leaf. Philip. Bot. 1 (1906) 61, 260, 2 (1908) 550, 4 (1911) 1324, 7 (1914) 2410.

Ficus paucinervia Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 44.

Luzon (Benguet), southward to Mindanao. In forests at low and medium altitudes; locally common. Borneo.

Local names: Bubúngog (Sub.); dolálog (P. Bis.); koldén (Ig.); ma-íahan (Mbo.); maratuyokai (S. L. Bis.); painog (Bik.); tábong (Ig.); tibunog (Ig.); tubóg (Bik.).

FICUS IRISANA Elm. Leaf. Philip. Bot. 1 (1906) 45, 2 (1908) 535.

Luzon (Benguet, Nueva Ecija, Rizal, Laguna, Camarines), Panay, Camiguin de Misamis. In thickets and forests at low and medium altitudes. Endemic.

Local name: Pili-na-dakó (P. Bis.).

FICUS IWAHIGENSIS Elm. Leaf. Philip. Bot. 4 (1912) 1381.

Palawan, *Elmer 13008*. In forests at low altitudes; closely allied to *Ficus forstenii* Miq. Endemic.

FICUS JAROENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 268

Luzon (Sorsogon), Leyte, Samar, Panay, *Wenzel 1089, Elmer 14847, 16214, B. S. 24324 Ramos, 30658 Ramos & Edaño*. In forests at medium altitudes. Endemic.

FICUS KALINGAENSIS Merr. in Philip. Journ. Sci. 20 (1922) 370.

Luzon (Kalinga), *B. S. 37592 Ramos & Edaño*. In the mossy forest, altitude about 1,300 m. Endemic.

FICUS LAEVICARPA Elm. Leaf. Philip. Bot. 4 (1912) 1395.

Palawan, *Elmer 12776, B. S. 601, 682, 667 Foxworthy*. In forests at low and medium altitudes, ascending to 1,100 m. Endemic.

Local names: Panpán (Tagb.); tabud (Tagb.).

FICUS LAGUNENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 273.

Luzon (Laguna, Camarines, Sorsogon), Catanduanes, Mindoro, *Phil. Pl. 1123 Merrill, B. S. 33650, 40578 Ramos & Edaño, 23533, 30384, 20491 Ramos*. In damp forests at low and medium altitudes. Endemic.

FICUS LAMAOENSIS Merr. in Philip. Journ. Sci. 18 (1921) 56.

Luzon (Bataan), *F. B. 2483, 2369 Borden, 2316 Meyer*. On ridges in the primary forest, altitude about 200 m. Endemic.

FICUS LAXIRAMEA Elm. Leaf. Philip. Bot. 4 (1911) 1257.

Mindanao (Bukidnon, Davao), *Elmer 10786, B. S. 38810, 39017 Ramos & Edaño*. In forests, altitude about 1,350 m. Endemic.

Local name: Kalatayia (Bag.).

FICUS LINEARIFOLIA Elm. Leaf. Philip. Bot. 1 (1907) 257.

Luzon (Tayabas, Laguna, Camarines, Sorsogon), Samar, *Elmer 7428, 7604, 9364, 17726, 14949, 14514, B. S. 24872 Edaño, 22104 Ramos, 33874 Ramos & Edaño*. In forests at medium altitudes. Endemic.

Local names: Daiñg-dáing (S. L. Bis.); tabóg (Bik.).

FICUS LINEARIS Merr. in Philip. Journ. Sci. 18 (1921) 65.

Samar, Mindanao (Zamboanga), *B. S. 17433 Ramos, 36575 Ramos & Edaño*. Along small streams in forests at low altitudes. Endemic.

FICUS LONGIPELUNCULATA (Merr.) Elm. Leaf. Philip. Bot. 1 (1907) 50, 244.

Ficus chrysolepis Miq. var. *longipedunculata* Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 11.

Ficus magallanensis Elm. Leaf. Philip. Bot. 4 (1911) 1315.

Luzon (Cagayan to Sorsogon), Palawan, Mindanao, *Elmer* 6176, 7730, 9365, 9375, 17890, 14436, *Merrill* 9380, *Phil. Pl.* 1124, *F. B.* 17224 *Curran*, 28469 *Salvosa*, *B. S.* 22136, 13672 *Ramos*. In primary forests at low and medium altitudes. Endemic.

Local names: Baléte (Tag., Bik.); nonók (C. Bis.).

FICUS LUCBANENSIS Elm. Leaf. Philip. Bot. 1 (1907) 254, 2 (1908) 541, 4 (1911) 1254.

Luzon (Tayabas, Zambales, Rizal, Laguna, Camarines, Sorsogon), Mindanao (Davao), *Elmer* 7541, 7632, 17622, *B. S.* 23432, 23419 *Ramos*, 33886, 33868 *Ramos*. In primary forests, altitude 700 to 1,300 m. Endemic.

Local name: Alian (Bag.).

FICUS LUZONENSIS Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 8.

Luzon (Tayabas, Rizal, Laguna, Camarines), Guimaras, Cebu, Mindanao, *Merrill* 1059, *B. S.* 14968, 11023, 26734 *Ramos*, 33771 *Ramos* & *Edaño*. In forests at medium altitudes.

Var. **IMBERBIS** Elm. Leaf. Philip. Bot. 4 (1911) 1323.

Sibuyan, Cebu, Mindanao, *Elmer* 12319, 12128, *B. S.* 34491, 34672 *Ramos* & *Pascasio*, 11064 *Ramos*, 37464 *Ramos* & *Edaño*, *F. B.* 15256 *Cenabre*. In forests at medium altitudes. Endemic.

Local names: Danglás (C. Bis.); dularóg (P. Bis.); lalikililánka (P. Bis.); malanánka (Tag.); salamnóg (P. Bis.).

FICUS MACROPODA Miq. in Hook. Lond. Journ. Bot. 7 (1848) 442, Fl. Ind. Bat. 1² (1858-59) 316, Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 294; F.-Vill. Novis. App. (1880) 201; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 252; Elm. Leaf. Philip. Bot. 1 (1906) 59; King in Ann. Bot. Gard. Calcutta 1 (1888) 144, t. 182.

Luzon (Ilocos Norte, Abra, Benguet, Bontoc, Nueva Vizcaya), *Cuming* 1933, *Elmer* 6368, 8487, *B. S.* 7199, 27690 *Ramos*, *F. B.* 17019 *Curran*, 18413 *Alvarez*. In thickets at low and medium altitudes. Endemic.

Local names: Aramtáp (Ilk.); kautiñgan (Gad.).

FICUS MALONUENSIS Warb. in Perk. Frag. Fl. Philip. (1905) 196; Elm. Leaf. Philip. Bot. 1 (1906) 192.

Ficus cordatifolia Elm. Leaf. Philip. Bot. 4 (1911) 1250.

Luzon (Isabela, Bataan, Laguna, Camarines), Mindoro, Palawan, Cebu, Mindanao, *F. B.* 3910, 17540 *Curran*, 20661 *Villamil*, 23769 *Alvarez*, 8671 *Merritt*, *B. S.* 11070 *Ramos*, *Elmer* 10997. In forests at low and medium altitudes; widely scattered. Endemic, but not clearly distinguishable from the Malayan form currently referred to *Ficus callosa* Willd.

Local names: Bagarila (Tag.); kalúkoi (Tag.); magalángit (Bag.).

FICUS MANILENSIS Warb. in Perk. Frag. Fl. Philip. (1905) 199; Elm. Leaf. Philip. Bot. 1 (1907) 250, 4 (1911) 1255, 7 (1914) 2404.

Ficus rudis Miq. var. *arborca* Elm. Leaf. Philip. Bot. 1 (1906) 54.

Ficus rudis Elm. Leaf. Philip. Bot. 2 (1908) 540, non Miq.

Ficus copiosa Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 271 (quoad Philip.); Rolfe in Journ. Bot. 23 (1885) 215; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 252, non Steud.

Luzon (Cagayan to Camarines), Mindoro, Ticao, Leyte, Negros, Cebu, Siargao, Mindanao, *Elmer* 7171, 8509, 9366, 15551, 18411, 17644, 13430, 10850, *Merrill* 5056, *B. S.* 32767, 27519, 39567 *Ramos*. In thickets and forests at low and medium altitudes. Endemic, unless referable to the closely allied *Ficus rudis* Miq. of Celebes.

Local names: Basikóng (Bag.); butlí (Bik.); dúñgon (Ig.); hagosíhis (Mbo.); tab-bág (Ibn.); talipáson (Bik.); uplás (Ilk.).

FICUS MEARNsii Merr. in Philip. Journ. Sci. 3 (1908) Bot. 402.

Batan and Babuyan Islands, Luzon (Cagayan, Tayabas), *B. S.* 3573, 8895 *Fénix*, 3232 *Mearns*, 26587 *Ramos* & *Edaño*, 10606 *McGregor*, *F. B.* 17225 *Curran*. On coral rocks along the seashore. Endemic.

Local name: Tapá (Iv.).

FICUS MEGACARPA Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 14, Philip. Journ. Sci. 1 (1906) Suppl. 46, 3 (1908) Bot. 402; Elm. Leaf. Philip. Bot. 1 (1906) 25, (1907) 248, 7 (1914) 2388.

Ficus elliptica Miq. in Hook. Lond. Journ. Bot. 7 (1848) 440, non HBK.

Babuyan Islands and northern Luzon to Mindanao and Sulu, *Cuming* 1927, *Elmer* 6757, 6102, 7471, 7827, 13932, 15613, 17506, 15393, *Williams* 559, 620, *B. S.* 13727, 16636 *Ramos*, *F. B.* 322 *Barnes*. In forests at low and medium altitudes. Endemic.

Local name: Katáupi (Mbo.).

FICUS MERRILLii Elm. Leaf. Philip. Bot. 1 (1908) 282.

Luzon (Benguet, Bontoc, Laguna), *Elmer* 8986, 8495, *Williams* 1125, *Merrill* Phil. Pl. 1743, *F. B.* 5114 *Curran*. In thickets and stream depressions, altitude 1,000 to 1,350 m. Endemic.

Local names: Banídag (Ig.); déudu (Ig.); labái (Bon.); píuis (Bon.).

FICUS MERRITTii Merr. in Philip. Journ. Sci. 4 (1909) Bot. 252; Elm. Leaf. Philip. Bot. 4 (1912) 1376.

Luzon (Camarines, Tayabas), Catanduanes, Mindoro, Palawan, Samar, Bucas Grande, Mindanao, *F. B.* 6852, 11466, 11477 *Merritt*, *B. S.* 24510, 24243, 30345 *Ramos*. In forests at low altitudes. Endemic.

Local names: Tábog (Tagb.); túbig (Tag.); toyukai (S. L. Bis.); tuboi (Mang.).

FICUS MICROSPHAERIA Warb. in Perk. Frag. Fl. Philip. (1905) 199; Elm. Leaf. Philip. Bot. 4 (1911) 1240.

Panay, Mindanao (Surigao, Bukidnon, Zamboanga, Davao), *B. S.* 34381 *Ramos* & *Pascasio*, 37021 *Ramos* & *Edaño*, 15722 *Fénix*, *Copeland* 1428, *Elmer* 10806, *Wenzel* 1895, 1896, 1851. In thickets and forests along streams, ascending to 900 m. Endemic.

Local names: Kalápat (Buk.); lalanǵis (Sub.); magulípid (Bag.).

FICUS MINAHASSAE (Teyism. & DeVr.) Miq. Mus. Bot. Lugd.-Bat. 3 (1867) 231, 296; King in Ann. Bot. Gard. Calcutta 1 (1888) 108; t. 140, 141; Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 11, 27 (1905) 79, Philip. Bureau Forest. Bull. 1 (1903) 18, Sp. Blancoanae

(1918) 125; Elm. Leaf. Philip. Bot. 1 (1906) 57, 198, (1907) 256, 2 (1908) 543, 4 (1911) 1264, 7 (1914) 2389.

Bosscheria minahassae Teysm. & De Vriese in Nat. Tijdschr. Nederl. Ind. 23 (1861) 212.

Ficus glomerata Blanco Fl. Filip. (1837) 683, ed. 2 (1845) 475, ed. 3, 3 (1879) 87, non Roxb.

Luzon (Cagayan to Sorsogon), Polillo, Mindoro, Masbate, Panay, Cebu, Leyte, Samar, Mindanao, Basilan. In primary forests, chiefly along streams at low and medium altitudes, ascending to 1,350 m. Celebes.

Local names: Alómit (Ig.); arinit (Ting.); ayimit (Tag.); ayúmit (Tag.); businag (Ilk.); gimit (Sub.); hagánit (Tag.); hagímit (Tag., Bis.); hagúmit (Tag.); hasimit (C. Bis.); lagúmit (Buk.); malatúngbog (Mbo.); matánug (Sul.); sabfóg (Bon.); sangai (Bag.); taisán (Yak.); tambis-tambís (C. Bis.); tambuyógan (S. L. Bis.).

FICUS MINDANAENSIS Warb. in Perk. Frag. Fl. Philip. (1905) 195; Elm. Leaf. Philip. Bot. 1 (1906) 188, 7 (1914) 2400.

Luzon (Camarines, Sorsogon), Mindoro, Biliran, Leyte, Camiguin de Misamis, Mindanao, *B. S.* 22131, 23311, 14475, 39628, 39827 Ramos, 34751, 34404 Ramos & Pascasio, Elmer 14416, 7183, 7184, 13579, Wenzel 1810, 1370, 1798, 1259, 47, 499, 1730. In thickets and forests at low and medium altitudes. Endemic.

Local names: Dalákit (Mbo.); dayákit (C. Bis.); kalápat (Buk.); ka-láuut (Bik.); magapísa (Mag.).

FICUS MINDORENSIS Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 12.

Ficus trichantha Warb. in Perk. Frag. Fl. Philip. (1905) 201.

Luzon (Ilocos Norte, Apayao, Zambales, Camarines), Mindoro, *B. S.* 32883, 32728, 37150, 39766, 39767 Ramos, 28270 Fénix, *F. B.* 10439 Curran, 3659 Merritt, McGregor 209, Merrill 1813, Dec. For. Fl. 285. In forests at low altitudes. Endemic.

Local names: Doui-doui (Bik.); tífíg (Tag.).

FICUS MIRABILIS Merr. in Philip. Journ. Sci. 18 (1921) 58.

Luzon (Bontoc, Laguna, Camarines), *B. S.* 20395 Ramos, 33490 Ramos & Edaño, Vanoverbergh 1354, 3970. In damp forests at medium altitudes, ascending to 1,400 m. Endemic.

FICUS MULTISTIPULARIS Merr. in Philip. Journ. Sci. 18 (1921) 66.

Catanduanes, Samar, *B. S.* 24412, 30270 Ramos. In forests along small streams at low altitudes. Endemic.

FICUS NERVOSA Heyne in Roth Nov. Pl. Sp. (1821) 338; King in Ann. Bot. Gard. Calcutta 1 (1887) 53, t. 65; Elm. Leaf. Philip. Bot. 2 (1908) 537.

Ficus apoensis Elm. Leaf. Philip. Bot. 4 (1911) 1249, 7 (1914) 2414.

Luzon (Cagayan to Camarines), Mindoro, Samar, Negros, Mindanao, Merrill Phil. Pl. 1557, *F. B.* 26098 Barros, *B. S.* 13333, 1028, 24259 Ramos, 36930 Ramos & Edaño, Elmer 13620, 10264, 10877, 10708, Clemens 1072. In forests at low and medium altitudes, ascending to 1,500 m. India to southern China and Malaya.

Local names: Dalíkit (S. L. Bis.); dapásan (Bag.); kanápai (Tag.); pálai (Ting.); tábog (Mbo.); tagítig (Bik.); tapásan (Bag.).

FICUS NOTA (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 10, 27 (1906) 79, Philip. Journ. Sci. 1 (1906) Suppl. 44, 3 (1908) Bot. 403, 5 (1910) Bot. 343, Fl. Manila (1912) 174, Sp. Blancoanae (1918) 125; Elm. Leaflet. Philip. Bot. 1 (1906) 58, 198, (1907) 257, 4 (1911) 1262.

Ficus aspera nota Blanco Fl. Filip. (1837) 677.

Ficus scabra Blanco op. cit. ed. 2 (1845) 471, ed. 3, 3 (1879) 81, non Forst. f.

Ficus gerontocarpa Warb. in Perk. Frag. Fl. Philip. (1905) 201, p.p., quoad fruct.

Batan Islands, Luzon (Cagayan to Sorsogon), Polillo, Mindoro, Culion, Palawan, Balabac, Samar, Biliran, Leyte, Panay. In thickets and forests at low and medium altitudes; common. Endemic.

Local names: Anraránum (Iv.); basikong (Bag.); bubunga (Sub.); dáoi (Gad.); katinbog (Lan.); kik-kik (Ibn.); labái (Is.); labéi (Bon.); tábug (Ibn.); tebég (Ilk.); tébel (Pang.); tébig (Ilk.); tíbei (Tagb.); túbig (Tag.); túbog (Ibn.); túbug (Ig.); tugbúg (Ting.); tuyokai (S. L. Bis.).

FICUS NUDA Miq. in Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 288; F.-Vill. Novis. App. (1880) 200; King in Ann. Bot. Gard. Calcutta 1 (1887) 47, in nota; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 251.

Urostigma nudum Miq. in Hook. Lond. Journ. Bot. 6 (1847) 584.

Ficus umbrina Elm. Leaflet. Philip. Bot. 1 (1906) 49, 4 (1911) 1245, 7 (1914) 2409.

Northern Luzon to Mindanao, in most or all islands and provinces, Cuming 1932, Elmer 6415, 6609, Merrill 1383, 1401, 7570, Phil. Pl. 2047, 2054, Williams 516, Wenzel 1248, B. S. 27373, 7629, 22387 Ramos, 20903 Escritor, 17804, 18330 Otones, 28264 Fénix, 11229, 18909 McGregor, F. B. 23089 Pascual, 17716 Curran, 26354 Mabesa, 2192 Meyer, 2384 Borden, all or mostly distributed as *Ficus benjamina* Linn. In forests at low and medium altitudes. Endemic.

Reduced by King to *Ficus benjamina* Linn. Elmer's type of *Ficus umbrina* is identical with Cuming 1932, the type of *F. nuda* Miq. The species differs from *Ficus benjamina* Linn., as the latter is currently interpreted, in its receptacles being ebracteate and in their being narrowed into a distinct pseudostalk. The receptacles are smaller than in *Ficus comosa* Roxb. (*F. benjamina* Linn var. *comosa* King).

Local names: Anúnga (Ibn.); arúnga (Neg.); baléte (Ilk., Bik., Tag., Bis.); baléting-ibon (Tag.); gísi (Ibn.); kuliámat (Neg.); robútum (Bag.); salísi (Is.); sirísim (Ibn.); tíbi (Bik.).

FICUS OBTUSA Hassk. Cat. Hort. Bogor. (1844) 75; King in Ann. Bot. Gard. Calcutta 1 (1888) 130, t. 163; Merr. in Philip. Journ. Sci. 18 (1921) 61.

Luzon (Laguna), F. B. 26749 Mabesa, 20212 Villamil. In primary forests, ascending to 400 m altitude. Malay Peninsula and Archipelago.

FICUS ODORATA (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 15, 27 (1905) 79; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 44, Fl. Manila (1912) 174, Sp. Blancoanae (1918) 126; Elm. Leaflet. Philip. Bot. 1 (1906) 201, (1907) 258, 2 (1908) 546.

Ficus hispida odorata Blanco Fl. Filip. (1837) 686, ed. 2 (1845) 476, ed. 3, 3 (1879) 89, *t.* 358.

Ficus arenata Elm. Leaf. Philip. Bot. 4 (1911) 1263, 7 (1914) 2405.

Luzon (Tayabas, Zambales, Pampanga, Bataan, Laguna), Samar, Leyte, Panay, Negros, Mindanao, *Elmer* 9368, 6652, 14564, 8300, 7172, 13321, 10505, *Williams*, 362, 2632, *Merrill* 1522, *Phil. Pl.* 203, *Sp. Blancoanae* 24. In thickets and forests at low and medium altitudes; sometimes planted. The dried specimens are fragrant, hence the specific name. Endemic.

Local names: Agosáhis (P. Bis.); agósos (Tag.); agúpit (P. Bis.); aplás (If.); isis (P. Bis.); kapinit (P. Bis.); malapágang (Buk.); pakiling (Tag.); paysán (Bag.); pili (Mbo.).

FICUS PACHYPHYLLA Merr. in Philip. Journ. Sci. 8 (1913) Bot. 365.

Luzon (Cagayan, Abra, Laguna), Leyte, Negros, Mindanao, *Wenzel* 209, 450, 1511, *F. B.* 4264 *Everett*, *B. S.* 26721 *Fénix*, 11950 *Robinson*. In forests at low and medium altitudes. Endemic.

Local names: Baléte (Tag.); lúnug (P. Bis.); pasaklá (Ilk.).

FICUS PALAWANENSIS Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 11 (*palauanensis*); Elm. Leaf. Philip. Bot. 1 (1907) 245, 4 (1911) 1244, (1912) 1380, 7 (1914) 2393.

Luzon (Abra, Nueva Vizcaya, Tayabas, Cavite, Laguna, Camarines), Mindoro, Palawan, Mindanao, *Merrill* 761, 4032, 5437, *Phil. Pl.* 1403, *Elmer* 7460, 9370, 13737, 11976, *B. S.* 33473, 37026 *Ramos & Edaña*, *B. S.* 7214 *Ramos*, *F. B.* 4127, 3835 *Curran*. In forests at low and medium altitudes. Endemic.

Local names: Agámid (Itn., Ilk.); agámit (Ting.); baléte (Mbo., Tag.); nonók (Sub.); ókob (Bag.).

FICUS PAYAPA Blanco Fl. Filip. (1837) 683, ed. 2 (1845) 475, ed. 3, 3 (1879) 86, *t.* 203; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 79.

Ficus indica Blanco Fl. Filip. (1837) 681, ed. 2 (1845) 473, ed. 3, 3 (1879) 85, non Linn.

Ficus forstenii Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 214, 285; King in Ann. Bot. Gard. Calcutta 1 (1887) 29, *t.* 29; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 46, 2 (1907) Bot. 435; Elm. Leaf. Philip. Bot. 1 (1906) 189.

Ficus pilosa Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t.* 203, non Reinw.

Ficus microcarpa F.-Vill. Novis. App. (1880) 199, non Linn. f.

Ficus vidaliana Warb. in Perk. Frag. Fl. Philip. (1905) 197.

Ficus saxophila F.-Vill. Novis. App. (1880) 199, non Blume.

Luzon (Ilocos Norte, Benguet, Lepanto, Abra, Zambales, Bataan, Batangas, Laguna, Rizal), Mindoro, Leyte, Negros, Mindanao, *Elmer* 8506, 7168, 8470, *F. B.* 14469, 14542 *Darling*, *Merrill Phil. Pl.* 2077, *Sp. Blancoanae* 82, *B. S.* 27675, 1366 *Ramos*. In forests at low and medium altitudes; allied to *Ficus pilosa* Reinw. Borneo, Celebes, Timor.

Local names: Baléte (Ig. Tag.); basákla (Ilk.); dalágit (Bis.); dalákit (C. Bis.); laṅgában (Mag.); nonók (Bis., Yak.); payápa (Tag.); puós (Itn.); puspús (Ilk.).

FICUS PEABODYI Elm. Leaf. Philip. Bot. 4 (1911) 1267.

Mindanao (Davao), *Elmer 10494*. In forests, altitude about 1,200 m. Endemic.

Local name: Basikong (Bag.).

FICUS PEDUNCULOSA Miq. in Hook. Lond. Journ. Bot. 7 (1848) 442, *t. 7, A*, Fl. Ind. Bat. 1² (1858-59) 316, Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 294; King in Ann. Bot. Gard. Calcutta 1 (1888) 145, *t. 183*; F.-Vill. Novis. App. (1880) 201; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 252.

Palawan, Sulu, Mindanao (?), *Cuming 1941, F. B. 25845 Natividad, Wester 27*. In thickets near the seashore. Endemic.

Local name: Gambit-gambit (Sul.).

FICUS PERFULVA Elm. in herb. nom. nov.

Ficus fulva Elm. Leaf. Philip. Bot. 7 (1914) 2407, non Reinw.

Luzon (Ilocos Norte, Laguna), Mindanao (Agusan), *Elmer 14090, 17857, 18271, B. S. 33139 Ramos*. In forests at medium altitudes, ascending to 1,400 m. Endemic.

Local name: Sumbái (Mbo.).

FICUS PHILIPPINENSIS Miq. in Hook. Lond. Journ. Bot. 7 (1848) 435, Fl. Ind. Bat. 1² (1858-59) 311, Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 293; F.-Vill. Novis. App. (1880) 201; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 252.

Ficus magnifica Elm. Leaf. Philip. Bot. 1 (1906) 51, (1907) 250.

Ficus decaisneana Miq. Fl. Ind. Bat. 1² (1858-59) 312; King in Ann. Bot. Gard. Calcutta 1 (1887) 6, *t. 3*.

Luzon (Cagayan to Sorsogon), Leyte, Panay, Siargao, Mindanao, *Cuming 1937, Elmer 6109, 8005, 8724, 8524, 9378, 7515, 17505, Merrill Phil. Pl. 1734, 1402, B. S. 12633 Félix, 10930 Ramos, 34982, 34890 Ramos & Pascasio, Loher 6942*. In forests at low and medium altitudes, ascending to 1,500 m. Timor, Celebes, Moluccas, New Guinea, New Caledonia, Marianne Islands.

Local names: Diákit (C. Bis.); káuis (Ig.); liuliu (If.); magulípid (Bag.); tayábas (P. Bis.).

FICUS PISIFERA Wall. Cat. (1831) No. 4505, *nomen nudum*; Miq. in Hook. Lond. Journ. Bot. 7 (1848) 427; King in Ann. Bot. Gard. Calcutta 1 (1887) 3, *t. 1*; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 17; Elm. Leaf. Philip. Bot. 1 (1906) 187, (1907) 239, 2 (1908) 534, 4 (1911) 1312, (1912) 1385, 7 (1914) 2395.

Luzon (Cagayan to Sorsogon), Catanduanes, Mindoro, Palawan, Balabac, Samar, Leyte, Panay, Mindanao, Basilan, *Elmer 15357, 17525, 12664, Merrill 9326, Phil. Pl. 1561, Wenzel 583, 1897, B. S. 21607 Escritor*. In thickets and forests at low and medium altitudes. Malay Peninsula and Archipelago.

Local names: Isís (Tag.); isís ligau (Tag.); koyoyóbang (Tagb.); lala-ñgíg (Sub.); líso (Mbo.); nonók (P. Bis.); oplás (Ilk.); pakiling labúyo (Tag.); pilig (C. Bis.).

FICUS PRODUCTA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 270.

Leyte, Mindanao (Butuan), *Weber 1132, 1131, Wenzel 1764*. In thickets and clearings at low altitudes; an ally of *F. ulmifolia* Lam. Endemic.

FICUS PROPINQUA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 8; Elm. Leaf. Philip. Bot. 1 (1906) 60, (1907) 259, 2 (1908) 546, 7 (1914) 2399.

Luzon (Benguet, Tayabas, Laguna), Mindanao (Agusan), *Elmer 6521, 7437, 9369, 13565, Baker 4109*. In forests at medium altitudes, ascending to 1,500 m. Endemic.

Local names: Hagnóg-lalágon (C. Bis.); sauód (Mbo.).

FICUS PRUNIFORMIS Blume Bijdr. (1825) 451; King in Ann. Bot. Gard. Calcutta 1 (1887) 24, t. 21; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 17.

Ficus johnsoni Elm. Leaf. Philip. Bot. 1 (1906) 190.

Luzon (Ilocos Norte to Sorsogon), Leyte, Mindanao, Basilan. In forests at low and medium altitudes. Malay Peninsula, Sumatra, Java, Borneo.

Local names: Baléte (Tag.); gasigma (Sub.).

FICUS PSEUDOPALMA Blanco Fl. Filip. (1837) 680, ed. 2 (1845) 473, ed. 3, 3 (1879) 84, t. 356; F.-Vill. Novis. App. (1880) 202; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 9, 27 (1905) 80, Philip. Journ. Sci. 1 (1906) Suppl. 44, 5 (1910) Bot. 343, Fl. Manila (1912) 173, Sp. Blancoanae (1918) 127; Elm. Leaf. Philip. Bot. 1 (1906) 202, (1907) 257, 2 (1908) 540, 4 (1911) 1316, 7 (1914) 2387.

Ficus haenkei Warb. in Perk. Frag. Fl. Philip. (1905) 195.

Ficus palmifolia Usteri Beitr. Ken. Philip. Veg. (1904) 127 sphalm.

Ficus blancoi Elm. Leaf. Philip. Bot. 1 (1908) 283.

Luzon (Benguet, Bontoc, Pangasinan, Tayabas, Bataan, Rizal, Laguna, Albay, Sorsogon), Mindoro, Panay, Samar, Negros, Guimaras, Mindanao. In thickets at low and medium altitudes, ascending to 1,200 m. A remarkable species; erect, unbranched, and palmlike in aspect. Endemic.

Local names: Adiági (Ig.); bananǵál (Mbo.); ikik (Ilk.); kadiábung (Ig.); kamíling (Bon.); kamíring (Bon., Ilk.); lanióg (P. Bis.); lubi-lubí (Bik.); niog-nióg (Bik., Tag.); niog-niógan (Tag.); sulamióg (P. Bis.); tabatabá (Man.); tagnánam (Buk.); tarabáng (Ig.).

FICUS PUBINERVIS Blume Bijdr. (1825) 452; King in Ann. Bot. Gard. Calcutta 1 (1887) 54, t. 66.

Ficus similis Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 47; Elm. Leaf. Philip. Bot. 1 (1907) 243, 4 (1911) 1313.

Ficus crassitoria Elm. Leaf. Philip. Bot. 2 (1908) 548, 4 (1912) 1397.

Luzon (Ilocos Norte, Ilocos Sur, Benguet, Tayabas, Cavite, Laguna, Sorsogon), Alabat, Sibuyan, Mindoro, Palawan, Samar, Negros, Mindanao, *Elmer 6866, 10032, 8849, 7716, 16890, 14411, 16769, Merrill 1065, 2364, 9379, 10440, Phil. Pl. 1012*. In forests at low and medium altitudes. Sumatra, Java, Borneo, Timor, Celebes.

Local names: Deudéu (Ig.); duugó (Tag.).

FICUS PUNCTICULATA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 131; Elm. Leaf. Philip. Bot. 2 (1908) 547.

Leyte, Negros, Mindanao (Lanao), *Clemens 1164, Wenzel 418, 167, 1237, B. S. 15270 Ramos, Elmer 9689*. In forests at low and medium altitudes. Endemic.

FICUS PUSTULATA Elm. Leaf. Philip. Bot. 4 (1912) 1389.

Palawan, Dumarán, *Elmer 12874, Merrill 9381, Phil. Pl. 1394, B. S. 21640, 21626 Escritor, B. S. 914 Foxworthy*. In thickets at low altitudes. Endemic.

FICUS RECURVA Blume Bijdr. (1825) 457; King in Ann. Bot. Gard. Calcutta 1 (1888) 131, *t. 165*; Elm. Leaf. Philip. Bot. 4 (1912) 1386.

Palawan, Leyte, *Merrill Phil. Pl. 1376, Elmer 13072, Wenzel 1123*. In thickets at low altitudes, ascending to 500 m. Malay Peninsula and Archipelago.

FICUS RELIGIOSA Linn. Sp. Pl. (1753) 1059; King in Ann. Bot. Gard. Calcutta 1 (1887) 55, *t. 67A*; F.-Vill. Novis. App. (1880) 199.

Cultivated in Manila, Cebu, and perhaps in other large towns; a very recent introduction from India.

FICUS REPANDIFOLIA Elm. Leaf. Philip. Bot. 1 (1906) 58, (1907) 256, 4 (1911) 1321, 7 (1914) 2392.

Ficus rostrata Blanco Fl. Filip. (1837) 697, ed. 2 (1845) 472, ed. 3, 3 (1879) 83, non Lam.

Ficus radicans F.-Vill. Novis. App. (1880) 201, non Roxb.

Ficus rubrovenia Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 44, 2 (1907) 270, Sp. Blancoanae (1918) 127.

Luzon (Cagayan to Sorsogon), Polillo, Mindoro, Catanduanes, Samar, Biliran, Leyte, Sibuyan, Panay, Negros, Mindanao, Basilan. Common in primary forests at low and medium altitudes. Endemic.

Local names: Basikóng (Mbo.); kamahíuan (P. Bis.); libtúhan (Mbo.); sabók (Ibn.); siau (Bik.); tabúyog (P. Bis.); talóbog (P. Bis.); tígig (Tag.); uloykáloi (P. Bis.).

FICUS RETUSA Linn. Mant. 1 (1767) 129; King in Ann. Bot. Gard. Calcutta 1 (1887) 50, *t. 61, 62*; F.-Vill. Novis. App. (1880) 199; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 18, Philip. Journ. Sci. 1 (1906) Suppl. 47; Elm. Leaf. Philip. Bot. 4 (1911) 1245.

Ficus nitida Thunb. Ficus (1786) 14; Vidal Cat. Pl. Prov. Manila (1880) 201.

Northern Luzon to Mindanao, *Merrill 7369, Phil. Pl. 1742, 2024, Elmer 5872, 8966, 17703, 11612, Baker 995, B. S. 130 Foxworthy, 12894 Fénix*. In thickets and forests at low and medium altitudes, ascending to 1,500 m; confused with *F. indica* Linn. India to southern China, Formosa, through Malaya to Australia and New Caledonia.

Local names: Baléte (Tag.); marabútan (Bag.).

FICUS RIBES Blume Bijdr. (1825) 463; King in Ann. Bot. Gard. Calcutta 1 (1888) 110, *t. 144*; F.-Vill. Novis. App. (1880) 201; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 253; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 44.

Covellia ribes Miq. Fl. Ind. Bat. 1² (1858-59) 325.

Covellia microcarpa Miq. in Hook. Lond. Journ. Bot. 7 (1848) 466.

Ficus cuneata Miq. in Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 297;
King in Ann. Bot. Gard. Calcutta 1 (1887) 110, t. 145, A; F.-Vill.
Novis. App. (1880) 202; Vidal Phan. Cuming. Philip. (1885) 146,
Rev. Pl. Vasc. Filip. (1886) 253.

Covellia cuneata Miq. in Lond. Journ. Bot. 7 (1848) 466, t. 8 B, Fl.
Ind. Bat. 1² (1858-59) 326.

Luzon (Cagayan to Albay), Mindoro, Panay, Camiguin de Misamis, Mindanao. Common in forests at low and medium altitudes. Malay Peninsula to New Guinea.

Local names: Adagei (Ig.); duñgarúg (Bis.); tibeg (Ilk.); túbig (Tag.).

FICUS RIVULARIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 272.

Luzon (Cagayan, Apayao, Tayabas), *F. B. 17806, 10134 Curran, B. S. 7399 Ramos, 28177 Fénix, 28875 Ramos & Edaño, Adduru 14.* Along streams on rocks, cliffs, etc. Endemic.

FICUS RUDIS Miq. Ann. Mus. Bot. Lugd.-Bat. 2 (1865-66) 222, 291;
King in Ann. Bot. Gard. Calcutta 1 (1888) 85, t. 108.

Mindanao (Lanao), *Clemens*. In thickets and forests, altitude about 750 m. Celebes.

FICUS RUFICAULIS Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 13,
Philip. Journ. Sci. 1 (1906) Suppl. 44; Elm. Leaf. Philip. Bot. 1
(1906) 60, 202, (1907) 258.

Ficus gerontocarpa Warb. in Perk. Frag. Fl. Philip. (1905) 201 p.p.,
excl. fruct.

Ficus paloensis Elm. Leaf. Philip. Bot. 2 (1908) 547, 4 (1911) 1322.

Ficus ruficaulis Merr. var. *paloensis* Elm. Leaf. Philip. Bot. 1
(1906) 203.

Luzon (Abra to Sorsogon), Polillo, Catanduanes, Mindoro, Culion, Palawan, Sibuyan, Samar, Leyte, Mindanao. In thickets and forests, sea level to an altitude of 1,500 m. Endemic.

Local names: Biri (Kuy.); datbáng (Ig.); handadáyug (C. Bis.); lag-lág (S. L. Bis.); lampiso (Sub.); malatiki (Tag.); pulot-pulot (Bik.); tabgúng (Bik.); tábong (Ig.); talóbog (P. Bis.); túbai (Tagb.).

FICUS SAMARENSIS Merr. in Philip. Journ. Sci. 18 (1921) 60.

Samar, Catanduanes, *B. S. 30290 Ramos, Merrill Phil. Pl. 1606*. In forests at low altitudes. Endemic.

FICUS SARGENTII Merr. in Philip. Journ. Sci. 18 (1921) 63.

Samar, *Sablaya 10*. In damp forests at low altitudes. Endemic.

FICUS SATTERTHWAITEI Elm. Leaf. Philip. Bot. 1 (1906) 199, 2
(1908) 543, 4 (1911) 1264, 1320, 7 (1914) 2392.

Luzon (Laguna, Camarines, Sorsogon), Biliran, Panay, Sibuyan, Guimaras, Negros, Camiguin de Misamis, Mindanao, *Elmer 17899, 15074, 12263, 9863, 13899, 10898, B. S. 22106 Ramos, 36588, 36695 Ramos & Edaño, 18935 McGregor, 31040 Ramos & Edaño*. In forests at low and medium altitudes, ascending to 1,100 m. Endemic.

Local names: Basikong (Bag.); katibog (Sub.); tabog (Mbo.); tábos (Man.); tabúgui (C. Bis.); tabúyog (P. Bis.); talóbog (P. Bis.).

FICUS SAXOPHILA Blume Bijdr. (1825) 437; King in Ann. Bot. Gard. Calcutta 1 (1887) 17, *t.* 12; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 47; Elm. Leaf. Philip. Bot. 2 (1908) 537.

Luzon (Benguet, Laguna, Bataan, Sorsogon), Cebu, Negros, *Elmer* 14427, 9644, *F. B.* 2588 Meyer, 26370 Catalan, *B. S.* 11045 Ramos. In forests at low and medium altitudes; very local. Java, Buru, Timor, Christmas Island.

Local name: Balitarhan (C. Bis.).

FICUS SERICEA C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 319.

Mindanao, Davao, *Williams* 2883. In forests. Endemic.

Local name: Maidóng (Bag.).

FICUS SIBULANENSIS Elm. Leaf. Philip. Bot. 4 (1911) 1266.

Samar, Mindanao (Davao), *Elmer* 11154, *B. S.* 17398 Ramos. In forests at low altitudes; allied to *Ficus pubinervis* Blume. Endemic.

Local name: Dapásan (Bag.).

FICUS SIBUYANENSIS Elm. Leaf. Philip. Bot. 4 (1911) 1319, 7 (1914) 2406.

Luzon (Cagayan to Albay), Sibuyan, Samar, Leyte, *Elmer* 17470, 12236, *F. B.* 24845 Barros, *B. S.* 22355, 22346, 24567, 30248 Ramos. In thickets and forests at low and medium altitudes; not satisfactorily distinguishable from *Ficus irisana* Elm. Endemic.

Local names: Bili (P. Bis.); hagopitán (Mbo.); uplás (Ilk.).

FICUS SORDIDISSIMA Elm. Leaf. Philip. Bot. 4 (1911) 1268.

Mindanao (Davao), *Elmer* 11218. In forests, altitude about 1,150 m. Endemic.

Local name: Basíkong (Bag.).

FICUS SPARSIFOLIA Merr. in Philip. Journ. Sci. 18 (1921) 64.

Luzon (Nueva Ecija), *B. S.* 26492 Ramos & Edaña. In thickets along streams at low altitudes. Endemic.

FICUS STIPULOSA Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 289; F.-Vill. Novis. App. (1880) 199; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 254; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 402, Fl. Manila (1912) 175.

Urostigma stipulosa Miq. in Hook. Lond. Journ. Bot. 6 (1847) 567, Fl. Ind. Bat. 1² (1858-59) 334.

Urostigma caulocarpum Miq. l. cc. 568, 334.

Ficus caulocarpa F.-Vill. Novis. App. (1880) 199; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 46; Elm. Leaf. Philip. Bot. 1 (1907) 244, non Miq.

Ficus infectoria Roxb. var. *caulocarpa* King in Ann. Bot. Gard. Calcutta 1 (1887) 63, *t.* 75; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 18; Elm. Leaf. Philip. Bot. 4 (1911) 1246, 313, 7 (1914) 2409.

Ficus infectoria Merr. in Philip. Bureau Forestry Bull. 1 (1903) 18; Elm. Leaf. Philip. Bot. 4 (1912) 1393, *vix* Roxb.

Ficus caulobotrya Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 251, non Miq. (vel Miq. p. p.).

Batan Islands, Luzon (Cagayan to Sorsogon), Palawan, Biliran, Leyte, Panay, Mindanao. Common in thickets and forests at low and medium altitudes; doubtfully distinct from *Ficus infectoria* Roxb., to which it was reduced by King. Endemic.

Local names: Baléte (Ibn., Bon., Sbl., P. Bis., Tag.); botgo (Bik.); hubúlung (Sbl.); kúba (Ting.); magamáno (Bag.); nonok (P. Bis.); pásápla (Ilk.); puspús (Ting.); sangláu (Ilk.).

FICUS STRANGULARIS Elm. Leaf. Philip. Bot. 4 (1912) 1382.

Palawan, *Elmer 12956*. In forests. Endemic.

FICUS SUBINTEGRA (Merr.) Elm. Leaf. Philip. Bot. 1 (1906) 56.

Ficus elmeri Merr. var. *subintegra* Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 10.

Luzon (Bontoc, Benguet, Nueva Vizcaya, Sorsogon), *Elmer 6317, 16527, B. S. 17512, 23654 Ramos, 31845 Santos*. In forests and forested ravines, altitude 1,100 to 2,100 m. Endemic.

Local names: Aplás (Ilk.); dugnái (Ig.).

FICUS SUBULATA Blume Bijdr. (1825) 461; King in Ann. Bot. Gard. Calcutta 1 (1887) 8, t. 6; Usteri Beitr. Ken. Philip. Veg. (1905) 127.

Ficus confusa Elm. Leaf. Philip. Bot. 1 (1906) 47, 187, (1907) 240, 2 (1908) 535, 4 (1911) 1239, (1912) 1387, 7 (1914) 2398.

Ficus setibracteata Elm. op. cit. 7 (1914) 2411.

Ficus driveri Elm. op. cit. 7 (1914) 2397.

Ficus inaequifolia Elm. op. cit. 1 (1907) 242, 2 (1908) 535, 4 (1911) 1240, 7 (1914) 2411.

Ficus insularis Miq. in Lond. Journ. Bot. 7 (1848) 435, Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 293, quoad *Cuming 1943*, in nota.

Throughout the Philippines at low and medium altitudes, ascending to 1,500 m. India to southern China and Malaya.

Local names: Baléting báging (Tag.); dalákit (P. Bis.); gigatgítmon (Mbo.); hagosós (Tag.); kalápot (Buk.); magulápi (Bag.); makabotoai (Mbo.); malaisís (Tag.); nanlobóyon (Mbo.); nusó (Iv.); nusú (Iv.).

FICUS SULCATA Elm. Leaf. Philip. Bot. 4 (1912) 1377.

Palawan, *Elmer 12686*. In thickets and forests at low altitudes. Endemic.

Local name: Nududalug (Tagb.).

FICUS TAYABENSIS Elm. Leaf. Philip. Bot. 1 (1907) 255, 4 (1912) 1387.

Luzon (Tayabas, Nueva Vizcaya, Bataan, Rizal, Laguna, Sorsogon), Palawan, *Elmer 7541, 7632, 14919, 13045, B. S. 20210 McGregor, 13592 Ramos, 20897 Escritor, Copeland 2043*. In forests at medium altitudes. Endemic.

FICUS TINCTORIA Forst. f. Prodr. (1786) 76; Miq. in Hook. Lond. Journ. Bot. 7 (1848) 436, t. 6, B; Elm. Leaf. Philip. Bot. 4 (1911) 1314.

Batan Islands and northern Luzon to Mindanao and the Sulu Archipelago, *B. S. 10165 McGregor, 27234, 11098, 17430 Ramos, Merrill 5400, 9443, 9439, Phil. Pl. 217*. Near the sea in thickets, on cliffs, etc. Formosa, Marianne and Caroline Islands, and Polynesia.

Local names: Baléting-bató (Tag.); birí (P. Bis.); labán (P. Bis.); loník (P. Bis.); nusú (Iv.).

FICUS TODAYENSIS Elm. Leaf. Philip. Bot. 4 (1911) 1261, 7 (1914) 2403.

Mindanao (Davao, Agusan), *Elmer* 11129, 10810, 13879. In thickets and forests up to 900 m altitude; to be compared with *Ficus irisana* Elm. and *F. sibuyanensis* Elm. Endemic.

Local names: Hagosihiis (Mbo.); ropít (Mbo.); rupít (Bag.).

FICUS ULMIFOLIA Lam. Encycl. 2 (1788) 499; Willd. Sp. Pl. 4² (1805) 1152; Miq. in Hook. Lond. Journ. Bot. 7 (1848) 234, Fl. Ind. Bat. 1² (1858-59) 299, Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 291; King in Ann. Bot. Gard. Calcutta 1 (1888) 185; F.-Vill. Novis. App. (1880) 200; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 403, Fl. Manila (1912) 174, Sp. Blancoanae (1918) 128.

Ficus difformis Lam. Encycl. 2 (1788) 500; Miq. in Hook. Lond. Journ. Bot. 7 (1848) 234, Fl. Ind. Bat. 1² (1858-59) 298; F.-Vill. Novis. App. (1880) 200; King in Ann. Bot. Gard. Calcutta 1 (1888) 181.

Ficus sinuosa Miq. in Hook. Lond. Journ. Bot. 7 (1848) 232 (incl. var. *integrifolia* Miq.), Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 291; Rolfe in Journ. Bot. 23 (1885) 215; Vidal Phan. Cuming. Philip. (1885) 145, Rev. Pl. Vasc. Filip. (1886) 254; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 45; Elm. Leaf. Philip. Bot. 1 (1907) 251.

Ficus heterophylla Blanco Fl. Filip. (1837) 685, ed. 2 (1845) 476, ed. 3, 3 (1879) 89; F.-Vill. Novis. App. (1880) 200; Vidal Sinopsis Atlas (1883) 39, t. 87, f. A; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 79, non Linn.

Ficus hispida Blanco (incl. var. *linearis* Blanco et var. *hastata* Blanco) Fl. Filip. (1837) 685, ed. 2 (1845) 476, ed. 3, 3 (1879) 88, non Forst.

Ficus quercifolia F.-Vill. Novis. App. (1880) 200; Usteri Beitr. Ken. Philip. Veg. (1905) 127; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 18, non Roxb.

? *Ficus asperrima* Elm. Leaf. Philip. Bot. 1 (1906) 53, non Roxb.

? *Ficus obscura* Elm. loc. cit., non Blume.

? *Ficus quercifolia* Roxb. var. *humilis* Elm. op. cit. 1 (1906) 192, 2 (1908) 541, non King.

Throughout the Philippines in thickets at low and medium altitudes, ascending to 1,500 m; very common and exceedingly variable, intergrading with *Ficus cumingii* Miq. and *F. blepharostoma* Warb. Endemic.

Local names: Agupit (Bik.); agusáhis (C. Bis.); alasás (Pamp.); ápas (Ig.); aplás (Ting.); apúlas (Bon., Ilk.); ásis (Tag.); bérís (P. Bis.); gisgís (Sbl.); hagupit (Tag., Bik.); isís (Tag.); katol (Bik.); kíkig (Ibn.); kuplás (Ig.); oplás (Ig.); pangisís (Tag.); plás (Ibn.); uplás (Ilk.); usú (Tag.); yayasi (Iv.).

FICUS UMBO-BRACTEATA Elm. Leaf. Philip. Bot. 4 (1911) 1247, 7 (1914) 2394.

Mindanao (Agusan, Davao), *Elmer* 11956, 14117. In forests, altitude 800 to 1,300 m; closely allied to *Ficus palawanensis* Merr. Endemic.

Local name: Úkong (Bag.).

FICUS VARIEGATA Blume Bijdr. (1825) 459; King in Ann. Bot. Gard. Calcutta 1 (1888) 169, *t.* 212; Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 13, Philip. Journ. Sci. 1 (1906) Suppl. 45, Sp. Blancoanae (1918) 125; Elm. Leaf. Philip. Bot. 2 (1908) 549, 4 (1911) 1270. *Ficus laebigata* Blanco Fl. Filip. (1837) 682, ed. 2 (1845) 474, ed. 3, 3 (1879) 86, non Vahl.

Ficus latsoni Elm. Leaf. Philip. Bot. 1 (1906) 204, (1907) 260, 4 (1911) 1270, 1324.

Luzon (Cagayan to Sorsogon) to Palawan and Mindanao. Common in primary forests at low and medium altitudes. Malay Peninsula and Archipelago and southern China.

Local names: Agí (Yak.); banákal (Bag.); basikong (Bag.); duóyog (P. Bis.); dudang (Sul.); dúdu (Ig.); laptái (Tag.); laptíng (Ilk.); lig-tug (Bon.); lita (Ibn.); payahan (Sbl.); rayaraya (Tag.); tabgón (Bik.); tangísang bayáuak (Sbl., Tag.); tuból (Pang.).

FICUS VILLOSA Blume Bijdr. (1825) 441; Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 294; King in Ann. Bot. Gard. Calcutta 1 (1888) 137, *t.* 172; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 44; Elm. Leaf. Philip. Bot. 1 (1906) 201, 4 (1911) 1263.

Luzon (Bataan), Leyte, Mindanao, *Elmer* 7170, 10566, *Clemens* 402, *F. B.* 2833 *Meyer*, *B. S.* 38591, 38799 *Ramos & Edaño*. In primary forests at medium altitudes. Malay Peninsula and Archipelago.

Local name: Katáupi (Bag.):

FICUS VIRIDIFOLIA Merr. in Philip. Journ. Sci. 8 (1913) Bot. 366.

Leyte, *Wenzel* 145. In forests at low altitudes. Endemic, unless referable to *Ficus pisifera* Wall. as a form or variety.

FICUS WARBURGII Elm. Leaf. Philip. Bot. 1 (1907) 247.

Luzon (Tayabas, Laguna, Sorsogon), *Elmer* 9376, 15850, 17879, 18042. On forested slopes, altitude about 900 m. Endemic.

FICUS WENZELII Merr. in Philip. Journ. Sci. 8 (1913) Bot. 367.

Ficus weberi Merr. op. cit. 9 (1914) Bot. 274.

Luzon (Camarines, Sorsogon), Leyte, Mindanao, Zamboanga (Butuan), *Weber* 1002, *Wenzel* 48, *B. S.* 15898 *Fénix*, 23566 *Ramos*, 33873, 36894, 36644 *Ramos & Edaño*. In forests at low and medium altitudes. Endemic.

Local name: Tambóg (Sub.).

FICUS WILLIAMSONII C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 177; Elm. Leaf. Philip. Bot. 7 (1914) 2396 (var. *epiphytica* Elm.).

Mindanao (Bukidnon, Agusan, Misamis, Lanao, Zamboanga, Basilan), *Williams* 2355, *Elmer* 13829, *Clemens* 1175, *Copeland* 1618, *B. S.* 16134 *Reillo*, 38723 *Ramos & Edaño*, 26064 *Fénix*, *F. B.* 25243 *Alvarez*. In forests, altitude 800 to 1,700 m. Endemic.

Local names: Baléte (Sul.); dahónon (Mbo.); nonók (Sub.).

FICUS WORCESTERI Merr. in Philip. Journ. Sci. 9 (1914) Bot. 274.

Samar, Mindanao (Bukidnon), small islands in the Sulu Sea (Cavilli, Arena), *Merrill* 7178, *B. S.* 24309, 24513 *Ramos*, 38635 *Ramos & Edaño*. In thickets and forests at low altitudes. Endemic.

Local names: Kagaskás-bató (S. L. Bis.); kalápak (Buk.).

FICUS XAVIERI Merr. in Philip. Journ. Sci. 20 (1922) 369.

Luzon (Laguna), *F. B. 28480 Salvosa*, *F. X. Williams*. In forests at low altitudes. Endemic.

DOUBTFUL AND EXCLUDED SPECIES

FICUS ALBA Reinw.; *F.-Vill. Novis. App.* (1880) 200.

FICUS ALBINERVIA Miq.; *F.-Vill. op. cit.* 201.

FICUS ANGULIDENS Miq.; *F.-Vill. l. c.*

FICUS ASPERA VOLUBILIS Blanco *Fl. Filip.* (1837) 676, ed. 2 (1845) 472, ed. 3, 3 (1879) 82; *Merr. Sp. Blancoanae* (1918) 129.

This is practically a *nomen nudum*; undeterminable.

FICUS BIGLANDULOSA Blume; *F.-Vill. op. cit.* 200.

FICUS CALOPHYLLA Blume; *F.-Vill. l. c.*

FICUS CALLOSA Merr. in Philip. Bureau Forestry Bull. 1 (1903) 18, non Willd.

The record was based on a sterile specimen which clearly does not represent Willdenow's species.

FICUS CONOCARPA Miq.; *F.-Vill. l. c.*

FICUS CONSOCIATA Blume; *F.-Vill. op. cit.* 199.

FICUS DICARPA Blanco *Fl. Filip.* (1837) 682 = *Ficus nepalensis* Blanco *op. cit.* ed. 2 (1845) 474, ed. 3, 3 (1879) 85, non Spreng.

The status of this species is entirely unrecognizable from Blanco's very imperfect description; see Merrill, *Sp. Blancoanae* (1918) 128.

FICUS GIBBOSA Blume *Bijdr.* (1825) 466; King in *Ann. Bot. Gard. Calcutta* 1 (1887) 4, *t. 2, 2a*; Ceron *Cat. Pl. Herb. Manila* (1892) 158.

The Philippine record is based on *Vidal 3791, 3804*; not seen.

FICUS GLOMERATA Roxb.; *F.-Vill. Novis. App.* (1880) 201.

FICUS HEDERACEA Roxb.; *F.-Vill. l. c.*

FICUS HIRTA Vahl; *F.-Vill. op. cit.* 200.

FICUS HUNTERI Miq.; *F.-Vill. l. c.*

FICUS IRREGULARIS Miq.; *Usteri Beitr. Ken. Philip. Veg.* (1905) 127.

FICUS LOBBII Miq.; *F.-Vill. Novis. App.* (1880) 201.

FICUS OBTUSIDENS Miq.; *F.-Vill. op. cit.* 201.

FICUS PILOSA Reinw.; *F.-Vill. op. cit.* 200.

FICUS POLITORIA Lam.; *F.-Vill. l. c.*

FICUS POMIFERA Kurz; *F.-Vill. op. cit.* 201.

FICUS PROCERA Reinw.; *F.-Vill. op. cit.* 199.

FICUS PUBESCENS Spreng; *Llanos ex F.-Vill. & Naves in Blanco Fl. Filip.* ed. 3, 4¹ (1880) 103.

FICUS PUNGENS Reinw.; F.-Vill. Novis. App. (1880) 200.

FICUS PYRIFOLIA Burm. f.; F.-Vill. op. cit. 199.

FICUS RACEMIFERA Roxb.; F.-Vill. op. cit. 201.

FICUS RADICANS Roxb.; F.-Vill. l. c.

FICUS SUBOBLIQUA Miq.; Usteri Beitr. Ken. Philip. Veg. (1905) 127.

FICUS SUBRACEMOSA Blume; F.-Vill. Novis. App. (1880) 201.

FICUS SUPERBA Miq.; F.-Vill. op. cit. 199.

FICUS TADJAN Miq.; F.-Vill. op. cit. 201.

FICUS TONDANA Miq.; F.-Vill. op. cit. 200.

FICUS VENOSA Willd.; F.-Vill. op. cit. 202.

FICUS WASSA Roxb.; F.-Vill. op. cit. 200.

16. CONOCEPHALUS Blume

CONOCEPHALUS ACUMINATUS Tréc. in Ann. Sci. Nat. Bot. III 8 (1847) 91; Miq. Fl. Ind. Bat. 1² (1858-59) 284; F.-Vill. Novis. App. (1880) 203; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 255; Barg.-Petr. in Nuov. Giorn. Bot. Ital. II 9 (1902) 221.

Luzon (Bontoc to Sorsogon), Catanduanes, *Cuming* 755, *Elmer* 7882, 8725, 15296, *Merrill Phil. Pl.* 1710, *B. S.* 20585 *Ramos*, 12627 *Fénix*, 23714, 30444 *Ramos*. In the Mountain Province mostly in thickets, farther south in the mossy forest on the higher mountains. Endemic.

Local names: Anapúl (Ig.); anopál (Bik.); anopó (Ig.); pongáu (Bon.).

CONOCEPHALUS DIFFUSUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 355.

Leyte, *Wenzel* 176, 857. In forests at medium altitudes. Endemic.

Var. *OBTUSUS* Merr. op. cit. 356.

Leyte, *Wenzel* 908, with the type. This species is perhaps not sufficiently distinct from *Conocephalus acuminatus* Tréc. Endemic.

CONOCEPHALUS ERECTUS (Blanco) F.-Vill. Novis. App. (1880) 203; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 80, *Sp. Blancoanae* (1918) 129 (excl. syn. *C. grandifolius* Warb.); Barg.-Petr. in Nuov. Giorn. Bot. Ital. II 9 (1902) 230.

Procris erecta Blanco Fl. Filip. (1837) 707, ed. 2 (1845) 490, ed. 3, 3 (1879) 111.

Conocephalus canescens Warb. in Perk. Frag. Fl. Philip. (1905) 167.

Luzon (Cagayan, Isabela, Rizal, Cavite, Laguna, Tayabas), *Warburg* 12479, *Merrill Sp. Blancoanae* 871, 960, *B. S.* 8035, 13949 *Ramos*, *F. B.* 19605 *Curran*, 28370 *Mabesa*. In forests at low and medium altitudes. Endemic.

Local name: Hanopól (Tag., Bis.).

CONOCEPHALUS GRANDIS (Wedd.) comb. nov.

Procris grandis Wedd. in Arch. Mus. Paris 8 (1855-56) 337, DC. Prodr. 16¹ (1869) 193; Miq. Fl. Ind. Bat. 1² (1858-59) 249; Rolfe in Journ. Bot. 23 (1885) 215; Vidal Rev. Pl. Vasc. Filip. (1886) 256, Phan. Cuming. Philip. (1885) 146.

Babuyan Islands, Luzon (Apayao, Tayabas, Bataan, Rizal, Laguna, Camarines), Panay, *B. S.* 3928, 4148, 28035 *Fénix*, *Elmer* 9227, *F. B.* 6513 *Curran*, *B. S.* 27855 *McGregor*, 29747 *Ramos & Edaño*. In forests at low and medium altitudes. Endemic.

The type of Weddel's species is *Cuming* 1730 in Herb. Kew., which he erroneously indicates as "In Nova Guinea? * * * V. S. in Hb. Kew."

Local names: Anopól (Bik.); anukól (Ibn.); hanopól (Tag.); litik (S. L. Bis.).

CONOCEPHALUS GRANDIFOLIUS Warb. in *Perk. Frag. Fl. Philip.* (1904) 167.

Northern Luzon to Mindanao, *Haenke*, *F. B.* 11602 *Curran*, 14221 *Whitford*, *B. S.* 38651 *Ramos & Edaño*, *Merrill* 7315, *Elmer* 13901, 10651, 15250. In forests at low and medium altitudes. Endemic.

Local names: Bukól (Buk.); opól (Bag.).

CONOCEPHALUS MOLLIS Merr. in *Philip. Journ. Sci.* 18 (1921) 51.

Samar, *B. S.* 17582 *Ramos*. In damp forests at low altitudes. Endemic.

CONOCEPHALUS PIPERI Elm. *Leaf. Philip. Bot.* 8 (1915) 2770.

Mindanao (Agusan, Lanao, Davao, Zamboanga), Basilan, *Piper* 450, *Elmer* 13653, *Clemens* 67, *F. B.* 13393 *Foxworthy*. In forests at low and medium altitudes. Scarcely distinct from *Conocephalus suaveolens* Blume. Endemic.

Local name: Hanopól (Mbo.).

CONOCEPHALUS SUAVEOLENS Bume *Bijdr.* (1825) 483; Tréc. in *Ann. Sci. Nat. Bot.* III 8 (1847) 87; F.-Vill. *Novis. App.* (1880) 203; Vidal *Sinopsis Atlas* (1883) 40, t. 88, f. D; Barg.-Petr. in *Nuov. Giorn. Bot. Ital.* II 9 (1902) 218.

Urtica naucleiflora Roxb. *Hort. Beng.* (1814) 67, *nomen nudum*, *Fl. Ind.* ed. 2, 3 (1832) 592.

Conocephalus naucleiformis Lindl. *Bot. Reg.* t. 1203.

Conocephalus ovatus Tréc. in *Ann. Sci. Nat. Bot.* III 8 (1847) 88; Rolfe in *Journ. Bot.* 23 (1885) 215; Vidal *Phan. Cuming. Philip.* (1885) 146, *Rev. Pl. Vasc. Filip.* (1886) 255.

Procris violacea Blanco *Fl. Filip.* (1837) 706, ed. 2 (1845) 490, ed. 3, 3 (1879) 110.

Conocephalus violaceus Merr. in *Govt. Lab. Publ. (Philip.)* 27 (1905) 80, *Philip. Journ. Sci.* 1 (1906) Suppl. 47, *Sp. Blancoanae* (1918) 129.

Conocephalus microphyllus Tréc. in *Ann. Sci. Nat. Bot.* III 8 (1847) 92; Walp. *Ann.* 1 (1849) 654; F.-Vill. *Novis. App.* (1880) 203; Barg.-Petr. in *Nuov. Giorn. Bot. Ital.* II 9 (1902) 222.

Northern Luzon to Mindanao; common in forests at low and medium altitudes. India to Malaya.

Local names: Anapól (Ig., Bik.); anapúl (Ig.); anopó (Bon.); buburúbad (Sub.); hanapúl (Tag.); hanopól (Tag.); hanopul (Tag.); hanupól (Bik.); kanupúl (Tag.); lagná (Tag.); napúl (Sul.); pañgau (Tag.); tagimi (Yak.); tobáyan (Tag.).

CONOCEPHALUS WARBURGII Elm. Leaf. Philip. Bot. 1 (1908) 278.

Luzon (Benguet), *Elmer 8973*. In forests at medium altitudes. Endemic. In the original description of the leaves the statement "obovately lanceolate" should be corrected to ovate-lanceolate.

Local name: Anoból (Ig.).

EXCLUDED GENUS

CECROPIA PALMATA Willd.

This is a recent introduction from tropical America and is in cultivation at Lamao, in Bataan Province, and in Manila.

URTICACEAE

1. **URTICA** Tournefort

URTICA BULLATA Blume Mus. Bot. Lugd.-Bat. 2 (1856) 145; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 474; Merr. op. cit. 344; Elm. Leaf. Philip. Bot. 3 (1910) 876.

Luzon (Benguet, Bontoc), Mindanao (Davao, Mt. Apo), *F. B. 16049 Curran, Zschokke, & Merritt, B. S. 37725 Ramos & Edaña, Elmer 11583*. On more or less open slopes, altitude about 2,000 m. Java.

Local name: Latóng (Bag.).

EXCLUDED SPECIES

URTICA HORRIDA HBK.; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 422.

"Ex horto (?) Manillensi" Walpers. The species is considered by Weddell to be a variety of *Urtica baccifera* (Linn.) Gaudich., of tropical America.

2. **LAPORTEA** Gaudichaud

LAPORTEA AGUSANENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2860.

Mindanao (Agusan), *Elmer 14019*. In shaded ravines, altitude about 230 m. Endemic.

Local names: Buñgábung (Mbo.); sagái (Mbo.).

LAPORTEA ANACARDIOIDES C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 478.

Mindanao (Davao), *Williams 2766*. At low altitudes, near Santa Cruz. Endemic.

LAPORTEA BATANENSIS C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 481.

Batan Islands (Batan), *B. S. 3719 Félix*. On slopes at low altitudes. Endemic.

Local name: Hateng (Iv.).

LAPORTEA BRUNNEA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 298.

Luzon (Bataan), Samar, *B. S. 17559 Ramos, F. B. 2850 Meyer*. In damp forests, ascending to 800 m. Endemic.

Local name: Lingaton (S. L. Bis.).

LAPORTEA CRASSIFOLIA C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 480.

Mindanao (Misamis, Lanao), *F. B. 3925 Hutchinson, Clemens 177*. In thickets, altitude 400 to 800 m.

Local name: Sagái (Lan.).

LAPORTEA DENSIFLORA C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 479.

Mindoro, Mindanao (Zamboanga), Camiguin de Misamis, *Merrill 998, B. S. 16446 Reillo, 14677 Ramos*. In thickets at low altitudes. Endemic.

LAPORTEA DIFFUSA C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 482.

Luzon (Tarlac), *F. B. 5149 Curran*. In sandy river bottoms. Endemic. Perhaps a form of *Laportea meyeniana* Warb.

LAPORTEA GRACILIPES Elm. Leaf. Philip. Bot. 3 (1910) 876; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 483.

Laportea lanaensis C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 483.

Luzon (Laguna, Sorsogon), Mindanao (Agusan, Lanao, Davao), *Elmer 10499, 15547, 15548, 17340, 14516, 13966, Clemens 462, F. B. 23125 Acuña, B. S. 36649 Ramos & Edaña, Baker 3215*. In thickets and forests, 700 to 1,200 m altitude. Borneo. This species is near if not identical with the Javan *Laportea stimulans* Miq.

Local names: Anuling (Lan.); lingatong (Sub.); sagái (Buk., Mbo.); saygadan (Mbo.); sigmit (Bag.).

LAPORTEA LEYTENSIS C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 484.

Leyte, *Elmer 7351*. At low altitudes. Endemic.

LAPORTEA LUZONENSIS (Wedd.) Warb. in Perk. Frag. Fl. Philip. (1905) 168; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 48; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 478.

Laportea crenulata Gaudich. var. *luzonensis* Wedd. in Arch. Mus. Paris 9 (1856) 133, DC. Prodr. 16¹ (1869) 85; Miq. Fl. Ind. Bat. 1² (1858-59) 230; Vidař Sinopsis Atlas (1883) t. 89, f. A, Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 255.

Laportea crenulata F.-Vill. Novis. App. (1880) 204; Vidal Rev. Pl. Vasc. Filip. (1886) 255; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 48, non Gaudich.

Luzon (Ilocos Norte, Benguet, Bataan, Laguna, Tayabas, Sorsogon), Mindoro, *Baker 3668, Merrill 4838, F. B. 2631 Meyer, B. S. 24061 Ramos, Cuming 522, Elmer 15206 (L. latilanceolata Elm.)*. In forests and forested ravines, at low and medium altitudes, ascending to 1,700 m. Endemic.

Local names: Lipá (Tag.); lupá (Ilk.).

LAPORTEA MEYENIANA (Walp.) Warb. in Perk. Frag. Fl. Philip. (1905) 168; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 481, 6 (1911) Bot. 320; Merr. Fl. Manila (1912) 181, Sp. Blancoanae (1918) 130. *Urtica* (?) *meyeniana* Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 422.

Urera gaudichaudiana Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 177.

Laportea gaudichaudiana Wedd. in Arch. Mus. Paris 9 (1856) 137,

DC. Prodr. 16¹ (1869) 86; Miq. Fl. Ind. Bat. 1.² (1858-59) 232; F.-Vill. Novis. App. (1880) 204; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 255; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 80.

Urtica umbellata Blanco Fl. Filip. (1837) 696, non Bory.

Urtica ferox Blanco op. cit. ed. 2 (1845) 484, ed. 3, 3 (1879) 102, non Forst.

Northern Luzon to Mindoro and Guimaras, *B. S. 12142 Ramos, Elmer 6464, 18235, Merrill Sp. Blancoanae 401, Phil. Pl. 438*. In thickets at low and medium altitudes. Endemic.

Local names: Adalateng (Ig.); alalátang (Ibn.); alalupá (Gad.); aparíagua (Bis.); bulanbúlan (P. Bis.); lasngaton (Bis.); lingaton (S. L. Bis.); lipá (Tag.); lipai (Tag., Bis.); lipáng-kalabáu (Tag.); lipáng-laláki (Neg.); lipang-dóton (Pamp.); lopá (Pang.) lupá (Ilk.); tokbo (Bon.); tubo (Is.).

LAPORTEA MINDANAENSIS Warb. in Perk Frag. Fl. Philip. (1905) 168; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 484.

Laportea stimulans Stapf in Trans. Linn. Soc. Bot. 4 (1894) 227, non Miq.

Mindoro, Panay, Mindanao, *Warburg 14702, Elmer 13324, B. S. 31101 Ramos & Edaño, Merrill 8148*. In thickets and forests at low and medium altitudes. Borneo.

Local name: Sagái (Mbo.).

LAPORTEA MONTICOLA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 299.

Luzon (Ifugao, Mt. Polis), *B. S. 19765 McGregor, Sandkuhl 298*. In the mossy forest, altitude about 2,000 m. Endemic.

LAPORTEA PENDULA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 270.

Catanduanes, *B. S. 30229 Ramos*. In damp forests along small streams at low altitudes. Endemic.

LAPORTEA PLATYPHYLLA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 176.

Luzon (Ilocos Norte, Sorsogon), Samar, *B. S. 24274, 33001, 24406 Ramos, Elmer 15608, 17262 (L. irosinensis Elm.)*. In damp forests along small streams at low altitudes. Endemic.

Local names: Liñgaton (S. L. Bis.); liñgaton-dagko (S. L. Bis.).

LAPORTEA RIGIDIFOLIA C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 483, 6 (1911) 30.

Luzon (Benguet), *Williams 991, B. S. 12748 Félix, F. B. 15801 Curran*. In the mossy forest, altitude about 2,000 m, and along mountain streams at lower altitudes. Endemic.

Local names: Adalateng (Ig.); lupá-a-nalabága (Ilk.).

LAPORTEA SUBCLAUSA C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 486.

Luzon (Laguna, Camarines, Sorsogon), Panay, *Merrill 6290, Phil. Pl. 294, Elmer 17972, 14974, B. S. 30876 Ramos & Edaño, 22906 McGregor*. In damp forests, ascending to 800 m. Endemic.

Local names: Lipáng-kalabáu (Tag.); sagái (Bik.).

LAPORTEA SUBPELTATA C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 485.

Mindanao (Misamis), *F. B. 4586 Mearns & Hutchinson*. In forests, altitude about 1,000 m. Endemic. Perhaps referable to *Laportea mindanaensis* Warb.

Local name: Sagí (Sub.).

LAPORTEA TRIPLINERVIA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 300.

Luzon (Tayabas, east coast, Sorsogon), *B. S. 19462 Ramos, 25532 Yates, Elmer 17300, 17152 (L. conduplicata Elm.)*. On forested slopes, altitude about 400 m. Endemic.

Local names: Lipáng-laláki (Tag.); manapli (Tag.).

LAPORTEA VENOSA Elm. Leaf. Philip. Bot. 3 (1910) 878; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 486.

Mindanao (Davao), *Elmer 11948*, altitude about 1,200 m. Endemic.

Local name: Sigmít (Bag.).

EXCLUDED SPECIES

LAPORTEA DECUMANA Wedd.; F.-Vill. Novis. App. (1880) 204.

LAPORTEA PELTATA Gaudich.; F.-Vill. l. c.

3. FLEURYA Gaudichaud

FLEURYA INTERRUPTA (Linn.) Gaudich. Bot. Freyc. Voy. (1826) 497; Miq. Fl. Ind. Bat. 1² (1858-59) 228; Wedd. in DC. Prodr. 16¹ (1869) 74; F.-Vill. Novis. App. (1880) 203; Vidal Phan. Cuming. Philip. (1885) 146; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 476; Merr. Fl. Manila (1912) 182, Sp. Blancoanae (1918) 130.

Urtica interrupta Linn. Sp. Pl. (1753) 985.

Bobehmeria interrupta Willd. Sp. Pl. 4¹ (1805) 342; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 423.

Urtica elongata Link Enum. Hort. Berol. 2 (1822) 385, non Gmel.

Urtica sessiliflora Blanco Fl. Filip. (1837) 696, non Sw.

Urtica capitata Blanco op. cit. ed. 2 (1845) 483, ed. 3, 3 (1879) 101, non Linn.

Urtica sessilifolia Wedd. in Arch. Mus. Paris 9 (1856) 105, sphalm.

Schtychowskyia interrupta W. F. Wight in Contr. U. S. Nat. Herb. 9 (1905) 371.

In cultivated areas, chiefly in disturbed soil in and about towns throughout the Philippines at low altitudes; a weed, probably introduced. Abyssinia to Australia and Polynesia.

Local names: Dalámo (Bis.); damóro (Bis.); daudaúa (Bis.); langála (Bis.); lipáng-áso (Tag.); lipáng-kastíla (Tag.); lopá (Pamp.).

FLEURYA RUDERALIS Gaudich. Bot. Freyc. Voy. (1826) 497; Wedd. in DC. Prodr. 16¹ (1869) 74; F.-Vill. Novis. App. (1880) 203; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 476.

Cavilli and other small islands in Sulu Sea, *Merrill Phil. Pl. 402*. In sandy soil near the sea. Java to New Guinea and Polynesia.

4. *PILEA* Lindley

PILEA APOENSIS Elm. Leatl. Philip. Bot. 3 (1910) 882; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 492.

Mindanao (Davao, Bukidnon), *Elmer 11551, B. S. 38697 Ramos & Edaño*. In forests, altitude about 1,700 m. Endemic.

Local name: Sogalum (Bag.).

PILEA BENGUETENSIS C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 488.

Luzon (Benguet, Bontoc, Nueva Vizcaya), *Merrill 9696, Phil. Pl. 801, Elmer 6304, B. S. 37673 Ramos & Edaño*. In damp shaded ravines, on cliffs, limestone boulders, etc., altitude 1,300 to 2,000 m. Endemic.

PILEA CALCICOLA C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 493, 6 (1911) Bot. 30

Luzon (Rizal, Bulacan), *Loher 6902, B. S. 13596, 29763 Ramos, 9529 Robinson, Merrill Phil. Pl. 51*. On limestone cliffs in forests and gorges at low and medium altitudes. Endemic.

PILEA DATAENSIS C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 494.

Luzon (Lepanto, Ifugao), *Merrill 4002, B. S. 19719 McGregor*. In the mossy forest, altitude about 2,100 m. Endemic.

PILEA HUMILIS C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 488.

Luzon (Bontoc, Lepanto, Benguet), Negros (Canlaon Volcano), *Merrill 6912, 6510, 4457, Phil. Pl. 273, Vanoverbergh 761, 1361*. In ravines, in the mossy forest, and on open peaks of the higher mountains, altitude 1,200 to 2,800 m. Endemic.

PILEA INTUMESCENS C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 492.

Panay, Mindanao, *B. S. 31050 Ramos & Edaño, Clemens 1223*. In damp shaded ravines, altitude about 700 m. Endemic.

PILEA LUZONENSIS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 48; C. B. Rob. op. cit. 5 (1910) Bot. 492.

Luzon (Benguet, Bataan, Rizal), Mindanao, *Merrill 8262, Whitford 279, 1129, Elmer 13707, B. S. 29718 Ramos & Edaño*. In damp shaded ravines along streams at medium altitudes, ascending to 1,400 m. Endemic.

Local names: Momogasag (Mbo.); ngálui (Ig.).

PILEA MELASTOMOIDES (Poir.) Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 186; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 344; C. B. Rob. op. cit. 490.

Urtica melastomoides Poir. in Lam. Encycl. Suppl. 4 (1816) 223.

Luzon (Lepanto, Kalinga, Ifugao, Bontoc, Benguet, Laguna), *Merrill 9664, 7632, 4784, 4579, 4498, Elmer 6533, B. S. 19718 McGregor, 37539 Ramos & Edaño*. In the mossy forest, altitude 1,800 to 2,300 m. India, Ceylon, Java.

PILEA MICROPHYLLA (Linn.) Liebm. in Vidensk. Selsk. Skr. 5² (1851) 302; C. B. Rob. in Philip Journ. Sci. 5 (1910) Bot. 487; Merr. Fl. Manila (1912) 182.

Parietaria microphylla Linn. Syst. ed. 10 (1759) 1308.

Pilea muscosa Lindl. Coll. Bot. (1821) t. 4; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 35; Usteri Beitr. Ken. Philip. Veg. (1904) 127.

Throughout the Philippines in and about towns, on damp walls, etc. A native of tropical America, now in most tropical countries.

Local name: Alabóng (Ig.).

PILEA MONTICOLA C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 489.

Luzon (Bontoc, Benguet), *B. S.* 31655 Santos, 5553 Ramos, Vanoverbergh 736, 1772. In the mossy forest, in damp shaded ravines, etc., altitude 1,200 to 2,300 m. Endemic.

Local name: Ngalasíngan (Ig.).

PILEA RIGIDA C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 491.

Luzon (Ifugao, Nueva Vizcaya), *B. S.* 8181 Ramos, 19722 McGregor. Altitude about 1,500 m. Endemic.

PILEA ROBINSONII Elm. Leaf. Philip. Bot. 3 (1910) 880; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 490.

Mindanao (Bukidnon, Davao), *Elmer* 10487, 11758, *B. S.* 15754 Félix. In damp forests, altitude about 1,000 m. Endemic.

Local names: Buás (Bag.); salimbágum (Bag.).

PILEA SYLVATICA Elm. Leaf. Philip. Bot. 3 (1910) 879; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 494.

Mindanao (Bukidnon, Davao), *Elmer* 11547, 11698, *B. S.* 39089, 38661 Ramos & Edaño. In damp forests and on wet cliffs, altitude 1,200 to 1,800 m. Endemic.

Local names: Hagalungyahong (Buk.); kalambolámbo (Buk.); román (Bag.); sigbút-tála (Bag.).

5. LECANTHUS Weddell

LECANTHUS PEDUNCULARIS (Wall.) Wedd. in DC. Prodr. 16¹ (1869) 164, p.p.; Elm. Leaf. Philip. Bot. 3 (1910) 883; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 345; C. B. Rob. op. cit. 495.

Procris peduncularis Wall. Cat. (1831) no. 4634; Royle Ill. Bot. Himal. (1839) t. 83, f. 2.

Lecanthus wallichii Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 187.

Lecanthus wightii Wedd. l. c.; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 30.

Elatostema ovatum Wight Ic. 6 (1853) 11, t. 1985.

Luzon (Benguet, Ifugao), Mindanao (Davao), on the higher mountains (Pulog, Pauai, Polis, Apo). India to China and Java.

Local name: Palauai (Bag.).

6. POLYCHROA Loureiro

(*Pellionia* Gaudichaud)

POLYCHROA FERRUGINEA Merr. in Philip. Journ. Sci. 20 (1922) 381.

Mindanao (Bukidnon), *B. S.* 37881 Ramos & Edaño. In forests, altitude 1,000 m. Endemic.

POLYCHROA MINDANAENSIS (C. B. Rob.) comb. nov.

Pellionia mindanaensis C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 496.

Mindanao (Bukidnon, Lanao, Davao), *Copeland 900, Elmer 10466, Clemens 407, 430, Williams 2634*. In damp forested ravines at medium altitudes. Endemic.

Local names: Dadar (Bag.); kalambolámbo (Buk.).

POLYCHROA MULTINERVIA Merr. in Philip. Journ. Sci. 20 (1922) 380.

Mindanao (Bukidnon), *B. S. 39137 Ramos & Edaño*. On trees in damp forests, altitude 900 m. Endemic.

POLYCHROA REPENS Lour. Fl. Cochinch. (1790) 559!

Pellionia daveauana N. E. Br. in Gard. Chron. (1880) 2: 262!

This is the type of the genus *Polychroa*; it is occasionally cultivated in Manila gardens. It is a native of Burma and Indo-China. *Elatostema repens* Hall. f. is a synonym, and *E. pulchrum* (N. E. Br.) Hall. f., judging from sterile specimens ex Hort. Bogor., is very closely allied to Loureiro's species.

POLYCHROA SINUATA (Blume) Merr. in Philip. Journ. Sci. 20 (1922) 382.

Procris sinuata Blume Bijdr. (1825) 511.

Pellionia sinuata Boerl. Handl. Kenn. Fl. Nederl. Ind. 3 (1900) 375;

C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 497.

Elatostema sinuatum Hassk. Cat. Hort. Bogor. (1844) 79.

Elatostema laciniatum Elm. Leaf. Philip. Bot. 1 (1908) 287.

Pellionia sordida Elm. l. c.

Central Luzon to Mindanao. In damp forests at low and medium altitudes, exceedingly variable in vegetative characters; *Pellionia platyphylla* Elm. in herb. (*Elmer 14465*) does not appear to be distinct. Java, Celebes, Moluccas.

Local names: Lulumed (Sub.); malatúbas (S. L. Bis.).

POLYCHROA VOLUBILIS (Elm.) comb. nov.

Procris volubilis Elm. Leaf. Philip. Bot. 8 (1915) 2867.

Polillo, Samar, Leyte, Camiguin, Mindanao (Agusan, Zamboanga, Bukidnon), *Elmer 13856, 13898, Merrill 5196, Wenzel 1202, B. S. 10335 McGregor, 15737 Fénix, 14487 Ramos, 39119, 36817, 36581 Ramos & Edaño*.

In damp forests at low and medium altitudes, ascending to 1,400 m. Endemic.

Local names: Nonái (Mbo.).

7. **ELATOSTEMA** Forster**ELATOSTEMA ACROPHILUM** C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 523, 6 (1911) Bot. 320.

Luzon (Tayabas, Laguna, Camarines), *B. S. 6577 Robinson, 22065 Ramos, 25422 Yates, Merrill 7493, Baker 849*. In the mossy forest on the higher mountains. Endemic.

ELATOSTEMA ACUMINATISSIMUM Merr. in Philip. Journ. Sci. 14 (1919) 375.

Luzon (Tayabas, east coast), *B. S. 29015 Ramos & Edaño*. In damp forests along streams at low altitudes; allied to *Elatostema contiguum* C. B. Rob. Endemic.

ELATOSTEMA AGUSANENSE Elm. Leaf. Philip. Bot. 8 (1915) 2845.

Luzon (Laguna, Sorsogon), Mindanao (Agusan), *Elmer 14250, 16331, 17728, 16628*. In forested ravines along small streams at medium altitudes. Endemic.

ELATOSTEMA ANGUSTATUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 523.

Elatostema camiguinense Elm. Leaf. Philip. Bot. 8 (1915) 2849.

Luzon (Rizal, Laguna), Camiguin de Misamis, Mindanao, *F. B. 3266 Ahern's collector, B. S. 13788, 14485 Ramos, 6614 Robinson, Elmer 14227*. Along streams in shaded ravines at low and medium altitudes. Endemic.

ELATOSTEMA ANTONII Elm. Leaf. Philip. Bot. 8 (1915) 2847.

Mindanao (Agusan), *Elmer 13894*. On bowlders in densely shaded ravines along streams, altitude about 900 m. Endemic.

Local name: Kalang-boau (Mbo.).

ELATOSTEMA APOENSE Elm. Leaf. Philip. Bot. 3 (1910) 885; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 534.

Mindanao (Davao), *Elmer 11793*. In dense forests, altitude about 1,200 m; near *E. hookerianum* Wedd. Endemic.

Local name: Rader (Bag.).

ELATOSTEMA APPENDICULATUM Merr. in Philip. Journ. Sci. 14 (1919) 379.

Luzon (Tayabas, east coast), *B. S. 29129 Ramos & Edaño*. In damp forests along small streams at low altitudes. Endemic.

ELATOSTEMA BANAHAENSE C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 526, 6 (1911) Bot. 307.

Elatostema carinoi W. R. Shaw ex C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 532, 6 (1911) Bot. 307.

Northern Luzon to Mindanao. In damp forests at medium and higher altitudes, ascending to 2,100 m in the mossy forest on high mountains. The Philippine representative of *Elatostema sessile* Forst. *Elatostema bulusanense* Elm. in herb. is not distinct. Endemic, unless referable to *E. sessile* Forst.

Local names: Maratúbong (Neg.); ngalui (Ig.); pio (If.).

ELATOSTEMA BARURINGENSE Elm. Leaf. Philip. Bot. 3 (1910) 890; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 541.

Mindanao (Davao), *Elmer 10916*. In dense forests, altitude about 1,200 m. Endemic.

Local name: Pamagtiñgan (Bag.).

ELATOSTEMA BENGUETENSE C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 539.

Luzon (Ifugao, Bontoc, Benguet). On the higher mountains in the mossy forest, altitude 1,800 to 2,300 m. Endemic.

ELATOSTEMA BONTOCENSE Merr. in Philip. Journ. Sci. 20 (1922) 371.

Luzon (Bontoc), *B. S. 37660 Ramos & Edaño*. In the mossy forest, altitude 1,800 m. Endemic.

ELATOSTEMA BRONGNIARTIANUM Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 190; Miq. Fl. Ind. Bat. 1² (1858-59) 242; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 538.

Elatostema sessile Forst. var. *minus* Wedd. in Arch. Mus. Paris 9 (1856) 294.

Elatostema sessile Forst. var. *brongniartianum* Wedd. in DC. Prodr. 16¹ (1869) 173; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 256.

Elatostema sessile Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 48, non Forst.

Northern Luzon to Mindanao. On rocks, cliffs, and banks of shaded ravines at medium altitudes, in Luzon ascending to 1,400 m; *E. rapicolum* Elm. in herb. is not distinct. Endemic.

Local name: Imbís (Mbo.).

ELATOSTEMA CAPIZENSE Merr. in Philip. Journ. Sci. 20 (1922) 372.

Panay, *B. S. 30748 Ramos & Edaño*. Along small streams in forests at low altitudes. Endemic.

ELATOSTEMA CATANDUANENSE Merr. in Philip. Journ. Sci. 13 (1918) Bot. 271.

Catanduanes, *B. S. 30555 Ramos*. On stones along small streams in dense forests at low altitudes. Endemic.

ELATOSTEMA CHEIROPHYLLUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 518.

Negros, Mindanao (Zamboanga), *Whitford 1595, Merrill 8211, 8217*. On banks and boulders along streams in shaded ravines at medium altitudes. Endemic.

ELATOSTEMA CONTIGUUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 536.

Luzon (Laguna, Tayabas, Camarines), Mindoro, *B. S. 9479 Robinson, 22021, 39387 Ramos, 28725 Ramos & Edaño, 23118 McGregor, Elmer 17729*. On shaded banks along streams at medium altitudes. Endemic.

ELATOSTEMA DELICATULUM Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 190; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 520.

Elatostema glaucescens Wedd. var. *delicatum* Wedd. in Arch. Mus. Paris 9 (1856) 325.

Elatostema obtusum Wedd. var. *delicatum* Wedd. in DC. Prodr. 16¹ (1859) 187.

Elatostema obtusum Wedd. l. c. quoad Philip.; F.-Vill. Novis. App. (1880) 204.

Elatostema delicatum Elm. Leaf. Philip. Bot. 2 (1908) 467.

Luzon (Cagayan, Isabela, Laguna, Rizal), Panay, Negros. On rocks and ledges in shaded stream beds at low and medium altitudes. Endemic.

ELATOSTEMA DISCOLOR C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 301.

Luzon (Ifugao, Benguet), *B. S. 13475 Ramos, 19728 McGregor*. In forests at or above 1,400 m altitude. Endemic.

ELATOSTEMA DIVERSILIMBUM Merr. in Philip. Journ. Sci. 14 (1919) 378.

Mindanao (Zamboanga), *Merrill 9127, B. S. 36645 Ramos & Edaño*. On banks and ledges in damp, shaded ravines, altitude 200 to 400 m. Endemic.

Local name: Gayatayat (Sub.).

ELATOSTEMA EDAÑOII Merr. in Philip. Journ. Sci. 20 (1922) 374.

Luzon (Kalinga), *B. S. 37603 Ramos & Edaño*. In forests, altitude 1,300 m. Endemic.

ELATOSTEMA EDULE C. B. Rob. in Philip. Journ. Sci. 5 (1910) 531.

Elatostema platyphyllum Merr. in Philip. Journ. Sci. 3 (1908) Bot. 404, non Wedd.

Batan Islands (Batan), *B. S. 3609 Félix*. Formosa.

Local name: Reirei (Iv.).

ELATOSTEMA ELMERI nom. nov.

Elatostema pictum Elm. Leaf. Philip. Bot. 8 (1915) 2850, non Hall. f.

Luzon (Tayabas, east coast), Mindanao (Agusan), *Elmer 13484, B. S. 28611 Ramos & Edaño*. About boulders in forests, altitude about 1,200 m. Endemic.

Local name: Yogáyod (Mbo.).

ELATOSTEMA EUPHLEBIUM Merr. in Philip. Journ. Sci. 20 (1922) 375.

Luzon (Bontoc), *B. S. 37765 Ramos & Edaño*. On forested slopes, altitude 1,800 m. Endemic.

ELATOSTEMA FILICAULE C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 516, 6 (1911) Bot. 302.

Luzon (Ifugao, Benguet), *Merrill 6621, 7627, Phil. Pl. 802, B. S. 19715 McGregor*. In the mossy forest, altitude 1,900 to 2,300 m. Endemic.

ELATOSTEMA GITINGENSE Elm. Leaf. Philip. Bot. 8 (1915) 2852.

Sibuyan, Panay, *Elmer 12421, B. S. 32468 McGregor*. On cliffs and in wet soil along small streams in shaded ravines, altitude 250 to 500 m. Endemic.

Local name: Ulmian (P. Bis.).

ELATOSTEMA GLAUCESCENS Wedd. in Arch. Mus. Paris 9 (1856) 325, DC. Prodr. 16¹ (1869) 187; Miq. Fl. Ind. Bat. 1² (1858-59) 245; F.-Vill. Novis. App. (1880) 204; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 256; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 521.

Luzon (Benguet, Bulacan, Bataan, Rizal, Laguna), Panay. Chiefly on mossy boulders and cliffs in shaded stream beds at low and medium altitudes; in places ascending to 1,200 m. Endemic.

ELATOSTEMA GLOMERATUM C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 302.

Luzon (Benguet), *Merrill 7641, 7642, Phil. Pl. 810*. On wet ledges, in shaded ravines, and in the mossy forest; altitude 1,400 to 1,900 m. Endemic.

ELATOSTEMA GRACILIFOLIUM Merr. in Philip. Journ. Sci. 13 (1908) Bot. 8.

Luzon (Nueva Ecija), *B. S. 26428 Ramos & Edaño*. On rocks in forests. Endemic.

ELATOSTEMA HALCONENSE C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 540.

Mindoro (Mt. Halcon), *Merrill 5786*. On forested ridges, altitude about 750 m. Endemic.

ELATOSTEMA HASTATUM Elm. Leaf. Philip. Bot. 2 (1908) 466; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 525.

Panay, Negros, Mindanao (Agusan), *Elmer 9829, 13791 McGregor*. In damp forests, altitude about 1,200 m. Endemic.

Local name: Koyonap (C. Bis.).

ELATOSTEMA HETEROPHYLLUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 517.

Negros (Canlaon Volcano), *Merrill 6911*. In forests on cliffs and in damp ravines, altitude 900 to 1,320 m. Endemic.

ELATOSTEMA HOLOPHYLLUM Merr. in Philip. Journ. Sci. 11 (1916) Bot. 5.

Luzon (Nueva Ecija, Sorsogon), Catanduanes, *B. S. 23329, 30190, 30203, 23546 Ramos*. On trees in the mossy forest and on boulders in shaded ravines at medium altitudes. Endemic.

Local name: Garubato (Neg.).

ELATOSTEMA INAEQUIFOLIUM Elm. Leaf. Philip. Bot. 3 (1910) 887; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 516.

Mindanao (Davao), *Elmer 11545*. On wet rocks along streams, altitude about 1,800 m. Endemic.

Local name: Rader (Bag.).

ELATOSTEMA INTEGRIFOLIUM (Don) Wedd. in DC. Prodr. 16¹ (1869) 179; Ceron Cat. Pl. Herb. Manila (1892) 162; Elm. Leaf. Philip. Bot. 3 (1910) 889; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 542.

Procris integrifolia Don Prodr. Fl. Nepal. (1825) 61.

Elatostema sesquifolium Hassk. Cat. Hort. Bogor. (1844) 79.

Procris sesquifolia Reinw. ex Blume Bijdr. (1825) 511.

Elatostema pulgarens Elm. Leaf. Philip. Bot. 5 (1913) 1846.

Palawan, Leyte, Mindanao, *Merrill 813, 7248, 9512, Wenzel 49, Elmer 10514, 13088, 13206*. In damp forests at medium altitudes. India to Java.

ELATOSTEMA KALINGAENSE Merr. in Philip. Journ. Sci. 20 (1922) 376.

Luzon (Kalinga), *B. S.* 37493 *Ramos & Edaño*. On boulders along streams, altitude about 1,200 m. Endemic.

ELATOSTEMA LAGUNENSE Merr. ex C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 527.

Luzon (Laguna, Tayabas, Bataan), Mindanao, *Merrill* 5118, 7133, *Phil. Pl.* 262, *Elmer* 17529, 18136, 9203, 8313, *B. S.* 6735, 9907 *Robinson*. In damp shaded ravines along small streams at low and medium altitudes, ascending to 1,000 m in wet forests. Endemic.

Local name: Pagmagtinang (Bag.).

ELATOSTEMA LANAENSE C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 528.

Mindanao (Lanao), *Clemens* 405. In shaded ravines, altitude about 700 m. Endemic.

ELATOSTEMA LIGNOSUM Merr. in Philip. Journ. Sci. 20 (1922) 377.

Luzon (Benguet), *Merrill* 9697. In shaded places about limestone boulders, altitude 1,400 m. Endemic.

ELATOSTEMA LONGIFOLIUM Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 189, DC. Prodr. 16¹ (1869) 184; Miq. Fl. Ind. Bat. 1² (1858-59) 249; F.-Vill. Novis App. (1880) 204; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 256; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 534, 6 (1911) Bot. 303.

Luzon (Laguna, Tayabas, Nueva Vizcaya), Mindanao, *Cuming* 456, *B. S.* 16466 *Reillo*, *F. B.* 25391 *Mabesa*. In forests at medium altitudes. Endemic.

Local names: Handalamog (C. Bis.); kagógko (Mbo.).

ELATOSTEMA LONGIPEDUNCULATUM Elm. Leaf. Philip. Bot. 3 (1910) 886; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 515.

Mindanao (Davao), *Elmer* 11593. On seepage slopes and ledges, altitude about 1,800 m. Endemic.

Local name: Rader (Bag.).

ELATOSTEMA LUTESCENS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 304.

Luzon (Benguet, Ilocos Norte), *Merrill* 7643, *Phil. Pl.* 811, *B. S.* 31907 *Santos*, 33120 *Ramos*, 11975, 14004 *Robinson*. On shaded cliffs, in thickets, and in the mossy forest; altitude 1,000 to 1,900 m. Endemic.

Local name: Ngálui-a-dadakkél (Ig.).

ELATOSTEMA LUZONENSE C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 512; Merr. Fl. Manila (1912) 183, Sp. Blancoanae (1918) 130.

Dorstenia pubescens Blanco Fl. Filip. (1837) 692; ed. 2 (1845) 481, ed. 3, 3 (1879) 98, non Forst.

Luzon (Bontoc to Camarines), Panay, *B. S.* 6135 *Robinson*, *Merrill* Sp. Blancoanae 158, *Phil. Pl.* 264. Common on wet cliffs, banks of ravines, etc., from sea level to at least 1,200 m altitude. Endemic.

ELATOSTEMA MACGREGORII Merr. in Philip. Journ. Sci. 14 (1919) 373.

Panay, *B. S.* 32396, 32538, 32438, 32407 *McGregor*. In damp forests, altitude 800 to 1,300 m. Endemic.

ELATOSTEMA MERRILLII C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 305.

Luzon (Benguet), *Merrill 7647*. In forests, altitude 1,800 m. Endemic.

ELATOSTEMA MICROPHYLLUM Elm. Leaf. Philip. Bot. 1 (1908) 286; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 523.

Luzon (Tayabas, Laguna), Panay, *Elmer 9149, 17636, 18361* (*E. maki-lingense* Elm.), *B. S. 9777 Robinson, 30855 Ramos & Edaño*. On boulders in damp shaded ravines along streams at medium altitudes. Endemic.

ELATOSTEMA OBLANCEOLATUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 524.

Negros (Canlaon Volcano), *Merrill 6909*. On shaded mossy stream banks, altitude 900 m. Endemic.

ELATOSTEMA OBOVATUM Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 190, Arch. Mus. Paris 9 (1856) 326, DC. Prodr. 16¹ (1869) 188; Miq. Fl. Ind. Bat. 1² (1858-59) 246; F.-Vill. Novis. App. (1880) 204; Vidal Phan. Cuming. Philip. (1883) 146, Rev. Pl. Vasc. Filip. (1886) 256; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 520, 6 (1911) Bot. 31.

Luzon (Laguna), *Cuming 628, B. S. 12370 McGregor*. In shaded ravines at low altitudes. Endemic.

ELATOSTEMA OBTUSIUSCULUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 537, 6 (1911) Bot. 31.

Luzon (Cagayan to Camarines), Leyte, Mindanao, *B. S. 9480 Robinson, 12755 Félix, 39284 Ramos & Edaño, Elmer 17752*. On rocks and banks in shaded ravines at low and medium altitudes. Endemic.

ELATOSTEMA PALAWANENSE C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 526.

Palawan, *B. S. 677 Foxworthy*. On damp forested slopes, altitude about 1,100 m. Endemic.

ELATOSTEMA PANAYENSE Merr. in Philip. Journ. Sci. 14 (1919) 372.

Panay, *B. S. 31057, 31032, 30921, 30924, 30925, 31082, 31083, 31084 Ramos & Edaño*. In damp forests along small streams at medium altitudes. Endemic.

ELATOSTEMA PHILIPPINENSE Elm. Leaf. Philip. Bot. 3 (1910) 888; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 524, 6 (1911) Bot. 199.

Luzon (Cagayan, Rizal, Sorsogon), Polillo, Negros, Mindanao, *Elmer 11751, Weber 1539, B. S. 13409 Ramos, 38656, 38691 Ramos & Edaño, 6841 Robinson, Merrill 6907, Elmer 16325, 15576* (*E. glabratum* Elm.) are scarcely distinct. Endemic.

Local names: Piadar (Bag.); rader (Bag.).

ELATOSTEMA PILOSUM Merr. in Philip. Journ. Sci. 14 (1919) 376.

Luzon (Nueva Vizcaya), *B. S. 20060 McGregor*. In forests at medium altitudes. Endemic.

ELATOSTEMA PINNATINERVIUM Elm. Leaf. Philip. Bot. 1 (1908) 286;
C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 515.

Luzon (Tayabas), *Elmer 9173, B. S. 9323 Robinson*. On mossy boulders in shaded ravines, altitude 30 to 750 m. Endemic.

ELATOSTEMA PLUMBEUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 535, 6 (1911) Bot. 31.

Luzon (Benguet), *B. S. 3495 Mearns, 12757 Fénix, Merrill 7634, 7635, Phil. Pl. 809*. In shaded ravines on cliffs and in the mossy forest, altitude 1,000 to 1,900 m. Endemic.

Local name: Ñgalúi (Ig.).

ELATOSTEMA PODOPHYLLUM Wedd. in Ann. Sci. Nat. IV 1 (1854) 189, DC. Prodr. 16¹ (1869) 186; Miq. Fl. Ind. Bat. 1² (1858-59) 245; F.-Vill. Novis. App. (1880) 204; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 256; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 540.

Luzon (Ifugao to Sorsogon), Mindoro, *Cuming 789, B. S. 19714 McGregor, 27921 Ocampo, 23315 Ramos, Merrill 6171, Elmer 16589*. In the mossy forest on higher mountains, up to an altitude of 2,300 m. Endemic.

ELATOSTEMA PULCHELLUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 522.

Luzon (Tayabas, Laguna), Mindanao, *B. S. 9824, 9835 Robinson, 19570 Ramos, Elmer 11343*. In the mossy forest on higher mountains, altitude 1,800 to 2,475 m. Endemic.

ELATOSTEMA PURPUREUM C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 306.

Luzon (Ifugao, Bontoc, Benguet), *Merrill 7644, Phil. Pl. 812, B. S. 19713, 19717, 20000 McGregor, 37782 Ramos & Edaña*. In the mossy forest, altitude about 1,800 m. Endemic.

ELATOSTEMA ROBINSONII Merr. in Philip. Journ. Sci. 14 (1919) 376.

Luzon (Ifugao, Mt. Polis), *B. S. 19727 McGregor*. Apparently from the mossy forest at or above 1,500 m altitude. Endemic.

ELATOSTEMA SAMARENSE Merr. in Philip. Journ. Sci. 20 (1922) 378.

Samar, *B. S. 34117 Ramos*. In damp forests at low altitudes. Endemic.

ELATOSTEMA SCAPIGERUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 542, 6 (1911) Bot. 307.

Luzon (Bontoc, Benguet), *Vanoverbergh 587, 1236, Merrill 4378, 7882, 7637, 7645, 7648*. On damp cliffs and in the mossy forest, altitude 1,100 to 2,000 m. Endemic.

ELATOSTEMA SCRIPTUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 529.

Luzon (Laguna, Mt. Banahao), *B. S. 9766 Robinson*. On rocks in forests, altitude about 800 m; doubtfully distinct from *E. banahaense* C. B. Rob. Endemic.

ELATOSTEMA SIMULANS C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 519, 6 (1911) Bot. 30.

Luzon (Benguet to Sorsogon), *B. S.* 8145, 13779, 21972 *Ramos*, 12753 *Fénix*, 12442, 12357 *McGregor*, *Elmer* 16173, 16968, 14613 (*E. pacificum* Elm.). On damp cliffs and in forests at low and medium altitudes. Endemic.

ELATOSTEMA SPINULOSUM Elm. Leaf. Philip. Bot. 2 (1908) 468; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 530.

Negros, Panay, *Elmer* 9776, *Merrill Phil. Pl.* 233, *B. S.* 30817 *Ramos*. In damp forests, altitude 600 to 1,600 m. Endemic.

Local name: Handalúmog (C. Bis.).

ELATOSTEMA SUBLIGNOSUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 541.

Luzon (Laguna, Mt. Banahao), *B. S.* 9754, 9859, 6040 *Robinson*, *Baker* 2416. In forests, altitude 600 to 800 m. Endemic.

ELATOSTEMA SUBORBICULARE Merr. in Philip. Journ. Sci. 14 (1919) 377.

Luzon (Ifugao, Mt. Polis), *B. S.* 19729 *McGregor*. Apparently in the mossy forest. Endemic.

ELATOSTEMA SURIGAOENSE Elm. Leaf. Philip. Bot. 8 (1915) 2854.

Mindanao (Agusan), *Elmer* 13637. In forests, altitude about 1,000 m. Endemic.

Local name: Teóí (Mbo.).

ELATOSTEMA TOMENTOSUM Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 189.

Elatostema subincanum Wedd. in Arch. Mus. Paris 9 (1856) 295.

Luzon (probably Benguet), *Callery*. A species of doubtful status which Weddell later reduced to *Elatostema sessile* Forst. var. *tomentosum* Wedd. in DC. Prodr. 16¹ (1869) 173. Weddell's type is in the herbarium of the Paris Museum.

ELATOSTEMA UMBRINUM Elm. Leaf. Philip. Bot. 8 (1915) 2855.

Elatostema urdanetense Elm. op. cit. 2857.

Mindanao (Agusan), *Elmer* 13831, 14249. In dense forests, altitude about 1,600 m. Endemic.

Local name: Namankoyong (Mbo.).

ELATOSTEMA VARIABILE C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 514, 6 (1911) Bot. 307, t. 1.

Luzon (Bontoc), *Vanoverbergh* 828, 1226. In forests, altitude about 1,650 m. Endemic.

ELATOSTEMA VARIEGATUM C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 538, 6 (1911) Bot. 31.

Luzon (Benguet, Laguna), *B. S.* 9767 *Robinson*, 12756 *Fénix*, *Elmer* 17949. On rocks in shaded stream beds altitude about 800 m. Endemic.

ELATOSTEMA VIRIDESCENS Elm. Leaf. Philip. Bot. 1 (1908) 285; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 525, 6 (1911) Bot. 31.

Luzon (Laguna, Tayabas, Cavite, Bataan, Sorsogon), Panay, *Elmer* 8076, 17476, 17491, 15371, *Merrill Phil. Pl.* 263, *B. S.* 32569, 32467, 32353 *McGregor*. Along streams in damp forests at low and medium altitudes. Endemic.

ELATOSTEMA WHITFORDII Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 48; Elm. Leaf. Philip. Bot. 3 (1910) 884; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 530.

Luzon (Bataan), Mindanao (Davao), *Whitford* 254, *F. B.* 1234 *Borden, Elmer* 10709. In densely shaded ravines along streams, altitude at and above 600 m. Endemic.

Local name: Rader (Bag.).

ELATOSTEMA ZAMBOANGENSE Merr. in Philip. Journ. Sci. 14 (1919) 374.

Mindanao (Zamboanga), *Merrill* 8228. In damp shaded ravines, altitude about 200 m. Endemic.

8. ELATOSTEMATOIDES C. B. Robinson

ELATOSTEMATOIDES GRACILIPES C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 503.

Bucas, *Merrill* 5269. On cliffs in shaded ravines at low altitudes. Endemic.

ELATOSTEMATOIDES LAXUM (Elm.) C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 502.

Elatostema laxum Elm. Leaf. Philip. Bot. 2 (1908) 465.

Elatostematoides sublaxum Elm. op. cit. 8 (1915) 2858.

Luzon (Tayabas, Sorsogon), Samar, Panay, Leyte, Mindanao, *Elmer* 7270, 10337, 13493, 14842, 17079, *B. S.* 19397, 15321, 24291 *Ramos*, 18085, 18135 *Robinson*, *Wenzel* 59, 68. In damp forests at low and medium altitudes. Endemic.

Local names: Handulúmog (C. Bis.); katko (Mbo.).

ELATOSTEMATOIDES MANILLENSE (Wedd.) C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 501, 6 (1911) Bot. 30, 200.

Elatostema manillense Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 189; Miq. Fl. Ind. Bat. 1² (1858-59) 243.

Elatostema rostratum Miq. var. *manillense* Wedd. in DC. Prodr. 16¹ (1869) 179; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 256.

Elatostema rostratum F.-Vill. Novis. App. (1880) 204, non Miq.

Batan Islands to Mindanao, *Cuming* 786, *Elmer* 14112, *B. S.* 13923, 7495 *Ramos*, 20006, 22791, 23108, 22770, 23116 *McGregor*, *Wenzel* 66, 1457. In forests at low and medium altitudes. Endemic.

Local names: Ayup (Buk.); bagáboñ. (Mbo.).

ELATOSTEMATOIDES MINDANAENSE C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 502.

Mindanao (Davao), *Copeland 935, 936*. In forests at medium altitudes. Endemic.

ELATOSTEMATOIDES RIGIDUM (Wedd.) C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 503.

Elatostema rigidum Wedd. in Arch. Mus. Paris 9 (1856) 320, DC. Prodr. 16¹ (1869) 185; Miq. Fl. Ind. Bat. 1² (1858-59) 245; F.-Vill. Novis. App. (1880) 204; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 256.

Samar, Leyte, Panay, Negros, Mindanao (Agusan, Zamboanga), *Cuming 1674, B. S. 24764 Edaño, 32350, 32464 McGregor, Elmer 13915, Wenzel 541, 1256*. In forests at low and medium altitudes. Endemic.

Local names: Malatúbas (S. L. Bis.), mahindóg (Mbo.).

ELATOSTEMATOIDES SAMARENSE Merr. in Philip. Journ. Sci. 14 (1919) 380.

Samar, *B. S. 17468 Ramos*. In primary forests along streams at low altitudes. Endemic.

9. PROCRIS Commerson

PROCRIS BRUNNEA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 5.

Luzon (Sorsogon), *B. S. 23705 Ramos*. Epiphytic in the mossy forest. Perhaps not sufficiently distinct from *Procris frutescens* Blume. Endemic.

PROCRIS DOLICHOPHYLLA Merr. in Philip. Journ. Sci. 8 (1913) Bot. 369.

Panay, Negros, Leyte, Mindanao (Agusan), *Wenzel 98, Merrill 7284, B. S. 31362 Ramos & Edaño*. Epiphytic in damp forests at low and medium altitudes. Endemic.

PROCRIS FRUTESCENS Blume Bijdr. (1825) 510; Wedd. in DC. Prodr. 16¹ (1869) 192.

Procris pseudostrigosa Elm. Leaf. Philip. Bot. 1 (1908) 284, 3 (1910) Bot. 883; C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 506.

Procris frutescens Blume var. *nervosa* Elm. Leaf. Philip. Bot. 8 (1915) 2863.

Central Luzon (Laguna) to Mindanao, *B. S. 16856 Serriñas, 10949 Ramos, 17067 Robinson, 16081 Reillo, 15752 Fénix, Elmer 7500, 17490, 10746, 16906*. In damp forests at low and medium altitudes, extending to the summits of some mountains to an altitude of 1,200 m. Malay Peninsula, Sumatra, Java.

Local names: Asin-asin (Buk.); marayháí (Mbo.); ráder (Bag.).

PROCRIS LAEVIGATA Blume Bijdr. (1825) 508; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 49.

Procris lagunensis C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 506, 6 (1911) Bot. 31.

Procris philippinensis C. B. Rob. in Philip. Journ. Sci. 5 (1910) 505, 6 (1911) Bot. 200.

Northern Luzon to Mindanao. In forests, usually epiphytic, sometimes on ledges; sea level to an altitude of 1,000 m or more, widely scattered. Tropical Asia, Africa, and Malaya.

Local name: Kamagtíg (Mbo.).

PROCRIS URDANETENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2865.

Mindanao (Agusan), *Elmer 13792, 13708*. In the mossy forest, altitude 1,600 to 1,800 m. Endemic. Closely allied to *Procris frutescens* Blume.

Local names: Kauing-káuing (Mbo.); pering (Mbo.).

PROCRIS WIGHTIANA Wall. Cat. (1831) no. 4638, *nomen nudum*, Wedd. Monogr. (1856) 336.

Elatostema wightianum Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 188.

Procris crenata C. B. Rob. in Philip. Journ. Sci. 5 (1910) Bot. 507.

Luzon (Bontoc), *Vanoverbergh 635*. Epiphytic, altitude about 1,400 m. India to China and Formosa; reduced by some authors to *Procris laevigata* Blume.

10. BOEHMERIA Jacquin

BOEHMERIA BEYERI C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 309.

Luzon (Ifugao, Benguet), *B. S. 13540 Beyer, Merrill 7630*. In the mossy forest, altitude up to 1,900 m. Endemic.

BOEHMERIA BLUMEI Wedd. in DC. Prodr. 16¹ (1869) 204; F.-Vill. Novis. App. (1880) 204; Vidal Phan. Cuming. Philip. (1885) 146, Rev. Pl. Vasc. Filip. (1886) 257; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 49; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 2; Elm. Leaf. Philip. Bot. 3 (1910) 891.

Margarocarpus heterophyllus Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 204.

Boehmeria heterophylla Blume Mus. Bot. Lugd.-Bat. 2 (1856) 204, non Wedd. 1854.

Pouzolzia heterophylla Miq. Fl. Ind. Bat. 1² (1858-59) 260.

Northern Luzon to Mindanao. In thickets, damp ravines, and forests; sea level to an altitude of about 1,000 m. Endemic.

Local names: Alalási (Ilk., Bon.); alibágid áloi (If.); dapsík (Ig.); kagóng (Bag.); kolokolót (Ilk.); laplúi (If.); manadláu (Mbo.); ngáloi (If.); parapantái (Neg.).

BOEHMERIA CELEBICA Blume Mus. Bot. Lugd.-Bat. 2 (1856) 217; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 5; Elm. Leaf. Philip. Bot. 3 (1910) 891.

Urtica celebica Blume Bijdr. (1825) 492.

Boehmeria platyphylla Don var. *celebica* Wedd. in DC. Prodr. 16¹ (1869) 211.

Mindanao (Bukidnon, Davao), *B. S. 15789 Félix, 38857, 39190 Ramos & Edaño, Elmer 11306*. In thickets along streams up to 1,200 m altitude. Celebes, Java.

Local names: Alamái (Buk.); páhid (C. Bis.); rami-rámi (Bag.); tamasí (Buk.).

BOEHMERIA CYPHOLOPHOIDES Merr. in Philip. Journ. Sci. 8 (1913) Bot. 368.

Leyte, *Wenzel 35*. In forests at low altitudes. Endemic.

BOEHMERIA DENSIFLORA Hook. & Arn. Bot. Beechy's Voy. (1841) 217; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 5.

Boehmeria platyphylla Don var. *loochooensis* Wedd. in DC. Prodr. 16¹ (1869) 213.

Boehmeria weddelliana Vidal Rev. Pl. Vasc. Filip. (1886) 256.

Luzon (Ilocos Norte, Ifugao, Bontoc, Benguet), *B. S. 33015, 7003 Ramos, 38084 Ramos & Edaña, 19723, 20002 McGregor, Vanoverbergh 269, Vidal 1784*. On open slopes, altitude 500 to 1,200 m. China, Riu Kiu Islands, Formosa.

Local name: Ngálui (Ig., Bon.).

BOEHMERIA HETEROPHYLLA Wedd. in Arch. Mus. Paris 9 (1856) 351, DC. Prodr. 16¹ (1869) 204; Miq. Fl. Ind. Bat. 1² (1858-59) 250; F.-Vill. Novis. App. (1880) 204; Vidal Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 257; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 2, non Blume, 1856.

Boehmeria cumingiana Blume Mus. Bot. Lugd.-Bat. 2 (1856) 199.

Northern Luzon to Mindanao, *B. S. 13849, 13850, 39749 Ramos, 28029 Féris, Merrill 5468*. In thickets, ravines, and forests at low and medium altitudes; scarcely distinguishable from *Boehmeria blumei* Wedd. Endemic.

BOEHMERIA MULTIFLORA C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 179, 6 (1911) Bot. 4.

Luzon (Ilocos Norte, Kalinga, Bontoc, Nueva Vizcaya, Nueva Ecija). In thickets and on open slopes, altitude 600 to 2,000 m. Endemic.

Local names: Kalalásbi (If.); karusán̄gi (Neg.); lábsu (Ig.); námi (If.); ngáliu (If.); sumsumánai (Klg.).

BOEHMERIA NIVEA (Linn.) Gaudich. Bot. Freyc. Voy. (1826) 499; Miq. Fl. Ind. Bat. 1² (1858-59) 253; Wedd. in DC. Prodr. 16¹ (1869) 206; F.-Vill. Novis. App. (1880) 205; Vidal Sinopsis Atlas (1883) 40, t. 89, f. C; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 404, Fl. Manila (1912) 181, Sp. Blancoanae (1918) 130; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 4.

Urtica nivea Linn. Sp. Pl. (1753) 985; Blanco Fl. Filip. (1837) 697, ed. 2 (1845) 484, ed. 3, 3 (1879) 102, t. 385.

Batan and Babuyan Islands, native or naturalized, occasionally planted in other parts of the Philippines. The ramie plant, a native of southern China, now cultivated in many tropical and subtropical countries.

Local names: Amírai (Tag.); arímai (Ilk.); damí (If.); hásu (Iv.); lipang áso (Tag.), lapnís (Ibn.); labnís (Ilk.).

Var. **TENACISSIMA** (Roxb.) Miq. Fl. Ind. Bat. 1² (1858-59) 253; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 4.

Urtica tenacissima Roxb. Fl. Ind. ed. 2, 3 (1832) 590.

Boehmeria tenacissima Gaudich. Bot. Freyc. Voy. (1826) 500.

Range of the species and scarcely distinguishable from it.

BOEHMERIA PLATYPHYLLA Don Prodr. Fl. Nepal. (1825) 60; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 4.

Luzon (Apayao, Laguna), *B. S.* 28030 *Fénix*, 6086, 6539 *Robinson*, *Merrill* 7482. In thickets, open places, etc., at low and medium altitudes. India to Africa, China, Japan, Malaya, and tropical Australia.

BOEHMERIA RUPESTRIS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 5.

Luzon (Benguet), *B. S.* 5542 *Ramos*. On rocks along streams, altitude about 1,300 m. Endemic.

BOEHMERIA VILLOSA C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 3.

Batan Islands, *B. S.* 3754 *Fénix*, 3227 *Mearns*, 10176 *McGregor*. Endemic.

Local name: Tangáu (Iv.).

BOEHMERIA ZOLLINGERIANA Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 201, DC. Prodr. 16¹ (1869) 208; C. H. Wright in Journ. Linn. Soc. Bot. 26 (1899) 488; Merr. in Philip. Journ. Sci. 14 (1919) 381.

Luzon (Ilocos Norte, Pangasinan). In ravines and on open slopes at low and medium altitudes. Java, Formosa.

EXCLUDED SPECIES

BOEHMERIA CYLINDRICA Willd.; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 423.

This is an American species, the Luzon specimen referred here by Walpers doubtless being erroneously identified with Willdenow's species.

BOEHMERIA MALABARICA Wedd.; F.-Vill. Novis. App. (1880) 204.

11. CHAMABAINIA Wight

CHAMABAINIA CUSPIDATA Wight Ic. 6 (1853) 11, *t.* 1981; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 344; C. B. Rob. op. cit. 6 (1911) Bot. 11; Elm. Leaf. Philip. Bot. 3 (1910) 893.

Urtica squamigera Wall. Cat. (1831) No. 4592, *nomen nudum*.

Boehmeria squamigera Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 203, *nomen nudum*.

Chamabainia squamigera Wedd. in DC. Prodr. 16¹ (1869) 218; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 184.

Luzon (Benguet), Mindanao (Davao, Mt. Apo), *Merrill* 4556, 7631, *Clemens* 9198, *Elmer* 11541. On cliffs, in the mossy forest, and on grassy summits of the higher mountains; altitude 1,700 to 2,800 m. India and Ceylon to southwestern China.

Local name: Paláuai (Bag.).

12. POUZOLZIA Gaudichaud

POUZOLZIA ARACHNOIDEA (Walp.) Wedd. in DC. Prodr. 16¹ (1869) 228; F.-Vill. Novis. App. (1880) 205; Vidal Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 257; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 6.

Boehmeria arachnoidea Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 423.

Stachyocnide luzonica Blume Mus. Bot. Lugd.-Bat. 2 (1856) 228, t. 55.

Pouzolzia macrura Wedd. in Arch. Mus. Paris 9 (1856) 396; Miq. Fl. Ind. Bat. 1² (1858-59) 257.

Luzon (Ilocos Sur, Batangas, Rizal), Mindoro, *Cuming 1492*, *Merrill Phil. Pl. 30, 1801*, *B. S. 1439 Ramos*. On boulders and cliffs and in thickets and thin forests at low and medium altitudes. Endemic.

Local names: Lagónoi (Tag.); maladalúnót (Tag.); ramai-rámai (Ilk.); tuiá (Tag.).

POUZOLZIA RUBRICAULIS (Blume) Wedd. in DC. Prodr. 16¹ (1869) 229; C. B. Rob. in Philip. Journ. Sci. 6 (1910) 8.

Leptocnide rubricaulis Blume Mus. Bot. Lugd.-Bat. 2 (1856) 194, t. 57.

Luzon (Benguet), *Merrill 4390*. On damp shaded banks, altitude about 1,400 m. Java.

POUZOLZIA ZEYLANICA (Linn.) Benn. Pl. Jav. Rar. (1838) 67; C. B. Rob. in Philip. Journ. Sci. 6 (1911) 8; Merr. Fl. Manila (1912) 183, Sp. Blancoanae (1918) 131.

Parietaria zeylanica Linn. Sp. Pl. (1753) 1052.

Parietaria indica Linn. Mant. 1 (1767) 128.

Pouzolzia indica Gaudich. Bot. Freyc. Voy. (1826) 503; Miq. Fl. Ind. Bat. 1² (1858-59) 257; Wedd. in DC. Prodr. 16¹ (1869) 221 (var. *angustifolia* Wedd.); F.-Vill. Novis. App. (1880) 205; Vidal Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 257; Elm. Leaf. Philip. Bot. 3 (1910) 894; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 404.

Urtica villosa Blanco Fl. Filip. (1837) 695, ed. 2 (1845) 483, ed. 3, 3 (1879) 99, non Salzm.

Urtica japonica Blanco op. cit. 694, 482, 99, non Thunb.

Pouzolzia viminea F.-Vill. Novis. App. (1880) 205, non Wedd.

Throughout the Philippines at low and medium altitudes, in open, usually damp grasslands. A polymorphous species of wide Indo-Malayan distribution.

Local names: Apoyapoyán (Tag.); kayutkóran (Bag.); tuiá (Tag.).

EXCLUDED SPECIES

POUZOLZIA QUINQUENERVIS Benn.; F.-Vill. Novis. App. (1880) 205.

13. GONOSTEGIA Turczaninow

GONOSTEGIA HIRTA (Blume) Miq. Ann. Mus. Bot. Lugd.-Bat. 4 (1869) 303; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 9; Merr. op. cit. 5 (1910) Bot. 344; Elm. Leaf. Philip. Bot. 3 (1910) 893.

Urtica hirta Blume Bijdr. (1825) 495.

Memoralis hirta Wedd. in DC. Prodr. 16¹ (1869) 235.^a

Pouzolzia hirta Hassk. Cat. Hort. Bogor. (1844) 80.

Gonostegia integrifolia C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 10, non Miq.

Luzon (Benguet, Bontoc, Rizal), Mindanao (Lanao, Davao). Common in ravines, thickets, and in some open grasslands, altitude 1,000 to 2,300 m. Malaya to Australia.

Local names: Alotót (Bon.); alulúi (Bon.); bagbágel (Bon.); laluaeí (Bon.); nañgul (Ig.); sakati (Bag.); tungayau (Buk.).

GONOSTEGIA PENTANDRA (Roxb.) Miq. Ann. Mus. Bot. Lugd.-Bat. 4 (1869) 302; Elm. Leaf. Philip. Bot. 3 (1910) 893; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 9.

Urtica pentandra Roxb. Fl. Ind. ed. 2, 3 (1832) 583.

Pouzolzia pentandra Benn. Pl. Jav. Rar. (1832) 64, t. 14; F.-Vill. Novis. App. (1880) 205; Vidal Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 257.

Memoralis pentandra Wedd. in DC. Prodr. 16¹ (1869) 235.^c

Hyrtanandra pentandra Miq. Fl. Ind. Bat. 1² (1858) 261.

Gonostegia alternifolia Turcz. in Bull. Soc. Nat. Mosc. 19² (1846) 510; Walp. Ann. 1 (1849) 558.

Gonostegia oppositifolia Turcz. l. c.; Walp. l. c.

Luzon to Mindanao. In cultivated lands along streams and in swampy places at low and medium altitudes, ascending to 1,400 m. India, Java.

Local name: Kayutkoran (Bag.).

GONOSTEGIA REPTANS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 10.

Luzon (Ifugao, Benguet, Nueva Ecija), *Elmer* 6140, 5828, *B. S.* 20005 *McGregor*, 26236 *Ramos & Edaño*. In damp open places and in thickets, altitude 1,000 to 1,400 m. Endemic.

14. DISTEMON Weddell

DISTEMON INDICUS Wedd. in Arch. Mus. Paris 9 (1857) 551, t. 20, A;

C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 11.

Distemon grossum Wedd. in DC. Prodr. 16¹ (1869) 235.^{cc}

Urtica grossa Wall. Cat. (1831) No. 4651, *nomen nudum*.

Luzon (Rizal), *B. S.* 1430 *Ramos*, 11857 *Robinson & Ramos*. On open slopes at low altitudes. India to Burma and Java.

15. CYPHOLOPHUS Weddell

CYPHOLOPHUS BRUNNEOLUS Elm. Leaf. Philip. Bot. 3 (1910) 896;

C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 12.

Luzon (Benguet, Bontoc), Panay, Negros, Mindanao, *Merrill* 6913, *Phil. Pl.* 1767, 806, *Elmer* 11641, *B. S.* 31915 *Santos*, 30815, 30814, 37572, 37681, 38754 *Ramos & Edaño*. In shaded ravines, mossy forests, etc., altitude 600 to 2,400 m. Borneo. Closely allied to *Cypholophus lutescens* Wedd.

Local names: Báai (Ig.); magsáing (Mbo.); ñgalui (Ig.); rami-rami (Bag.); salabogan (Bag.).

CYPHOLOPHUS MICROPHYLLUS Elm. Leaf. Philip. Bot. 3 (1910) 895;

C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 12.

Mindanao (Davao, Mt. Apo), *Elmer* 11588. Altitude about 1,800 m. Endemic.

Local name: Rami-rámi (Bag.).

CYPHOLOPHUS MOLUCCANUS (Blume) Miq. Ann. Mus. Bot. Lugd.-Bat.

4 (1869) 305; Elm. Leaf. Philip. Bot. 3 (1910) 895; C. B. Rob.

in Philip. Journ. Sci. 6 (1911) Bot. 11.

Urtica moluccana Blume Bijdr. (1825) 491.

Cypholophus macrocephalus Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 198, DC. Prodr. 16¹ (1869) 235¹⁰; Miq. Fl. Ind. Bat. 1² (1858-59) 262; F.-Vill. Novis. App. (1880) 205; Vidal Sinopsis Atlas (1883) 40, t. 89, f. B, Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 257.

Boehmeria mollis Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 203.

Luzon (Bontoc to Sorsogon), *Elmer 16042* (*C. obliquifolium* Elm.), Mindoro, Panay, Leyte, Negros, Mindanao. In damp forested ravines at low and medium altitudes, ascending to 1,500 m. Sumatra to Hawaii.

Local names: Anadúng (Bon.); handalúmai (C. Bis.); hológ (Mbo.); libása (Lan.); salabúgan (Bag.).

EXCLUDED SPECIES

CYPHOLOPHUS PROSTRATUS Wedd.; F.-Vill. Novis. App. (1880) 205.

16. PIPTURUS Weddell

PIPTURUS ANGUSTIFOLIUS Merr. in Philip. Journ. Sci. 20 (1922) 379.

Leyte, *B. S. 15320 Ramos*. In thickets along streams at low altitudes. Endemic.

PIPTURUS ARBORESCENS (Link) C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 13; Merr. Fl. Manila (1912) 180; Sp. Blancoanae (1918) 131.

Urtica arborescens Link Enum. Hort. Berol. 2 (1822) 386; Blanco Fl. Filip. ed. 2 (1845) 483, ed. 3, 3 (1879) 100, t. 371.

Urtica baccifera Blanco Fl. Filip. (1837) 695, non Linn.

Pipturus asper Wedd. in Ann. Sci. Nat. IV 1 (1854) 197; DC. Prodr. 16¹ (1869) 235¹⁷; Miq. Fl. Ind. Bat. 1² (1858-59) 269; F.-Vill. Novis. App. (1880) 205; Vidal Sinopsis Atlas (1883) 40, t. 89, f. D, Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 257; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 81; Philip. Journ. Sci. 1 (1906) Suppl. 49, 3 (1908) Bot. 404, 5 (1910) Bot. 344.

Very common and widely distributed in the Philippines from the Batan Islands to Mindanao and Palawan, chiefly in thickets and second-growth forests at low and medium altitudes; in Benguet ascending to 2,000 m altitude. Borneo, Botel Tobago.

Local names: Agandóng (Ilk.); agdalámai (Tag.); alaṅṅísi (Bis.); alalátang (Ap.); alúdig (Ilk.); aṅgaṅṅéu (Bon.); arámai (Iv.); arandóng (Ilk.); dalónot (Tag.); dalonótan (Bis.); dalúnót (Tag.); damáian (Ig.); daṅṅét (Bon.); duái (Ig.); gimas-gimas (P. Bis.); gúnoi (Mag.); gut-gutú (If.); handalámai (C. Bis.); himarámai (Bis.); hindalúmai (Bis.); hindarámai (P. Bis.); kandámai (Tagb.); láí (Bon.); lámai (Mbo., Sub.); moliungol (Ig.); ṅgáliu-gutgutú (If.); ṅgúṅgoi (Ig.); sámái (Sul.); takóptakóp (Ilk.); taktakóp (Ilk.).

PIPTURUS ARGENTEUS (Forst. f.) Wedd. in DC. Prodr. 16¹ (1869) 235¹⁰; F.-Vill. Novis. App. (1880) 205; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 16.

Urtica argentea Forst. f. Prodr. (1784) 65.

Balabac, Lumbucan, Mindanao (Surigao), *B. S. 15831 Fénix, Merrill 7185, Phil. Pl. 401*. In sandy soil, open forests near the sea. Sumatra to Australia and Polynesia.

PIPTURUS DENTATUS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 311.

Pouzolzia dentata C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 7.

Luzon (Benguet, Ifugao), *B. S. 31698 Santos, 19726 McGregor, Elmer 6531, Merrill 4741, 6561, Phil. Pl. 807*. On open slopes, thin pine forests, etc., altitude 1,900 to 2,300 m. Endemic.

Local names: Nálui (Ig.); ñgálui (Ig.).

PIPTURUS DISCOLOR C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 15.

Panay, Mindanao (Lanao, Bukidnon, Agusan, Davao), *B. S. 30866, 39045 Ramos & Edaño, Elmer 11776, 13859, Clemens 676*. In forests, altitude 700 m and above. Endemic.

Local names: Rami-rámi (Bag.); silisilis (Mbo.); tapuál (Buk.).

PIPTURUS MINDANAENSIS Elm. Leaf. Philip. Bot. 3 (1910) 898; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 14.

Mindanao (Davao), *Elmer 10520*. On open slopes, altitude about 1,125 m. Endemic.

Local name: Amirámi (Bag.).

PIPTURUS REPANDUS (Blume) Wedd. in Arch. Mus. Paris 9 (1856) 448, DC. Prodr. 16¹ (1869) 235³⁹; Miq. Fl. Ind. Bat. 1² (1858-59) 269; F.-Vill. Novis. App. (1880) 206; Vidal Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 258; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 15.

Urtica repanda Blume Bijdr. (1825) 501.

Pipturus ellipticus Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 197.

Luzon (Bontoc to Sorsogon), Mindoro, Panay, Leyte. In damp forested ravines near streams, at low and medium altitudes; in the Mountain Province, sprawling over ledges and boulders up to an altitude of 1,600 m. Sumatra to the Moluccas.

Local names: Duái (Ig.); sabsábui (Ig.).

PIPTURUS SUCCULENTUS Elm. Leaf. Philip. Bot. 3 (1910) 897; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 15.

Mindanao (Davao), *Elmer 10739*. In thickets along Baruring River, altitude about 1,000 m. Endemic.

Local name: Rámi (Bag.).

17. DEBREGEASIA Gaudichaud

DEBREGEASIA LONGIFOLIA (Burm. f.) Wedd. in DC. Prodr. 16¹ (1869) 235²⁴; Rolfe in Journ. Bot. 23 (1885) 215; Vidal Rev. Pl. Vasc. Filip. (1886) 258; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 344.

Urtica longifolia Burm. f. Fl. Ind. (1768) 297.

Debregeasia angustifolia C. B. Rob. in Philip. Journ. Sci. 6 (1910) Bot. 18.

Debregeasia luteocarpa Elm. Leaf. Philip. Bot. 8 (1915) 2843.

Luzon (Abra, Bontoc, Ifugao, Lepanto, Benguet), Mindanao (Agusan). Common in thickets, ravines, and in damp forests, altitude 1,000 to 2,300 m. India to China, Sumatra, Borneo, and Java. The Luzon form closely matches the Javan type, while *D. luteocarpa* Elm. is distinguishable only by the yellowish rather than red fruits.

Local names: Anamúi (Bon.); damái (Mbo.); damáyan (Ig.); gomáyan (Ig.); lamái (Ig.); lamáyon (Ig.); nam-éi (Bon.); nam-úi (Ig.); nanúui (Ig.).

18. OREOCNIDE Miquel

(*Villebrunea* Gaudichaud)

OREOCNIDE RUBESCENS (Blume) Miq. Ann. Mus. Bot. Lugd.-Bat. 4 (1869) 306; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 16.

Urtica rubescens Blume Bijdr. (1825) 506.

Villebrunea rubescens Blume Ann. Mus. Bot. Lugd.-Bat. 2 (1856) 167; Rolfe in Journ. Bot. 23 (1885) 215; Vidal Rev. Pl. Vasc. Filip. (1886) 258.

Villebrunea frutescens Merr. in Philip. Bureau Forest. Bull. 1 (1903) 19, non Blume.

Central Luzon (Laguna, Tayabas) to Mindanao. In damp shaded ravines, near streams at low and medium altitudes. Java, Celebes, and the Moluccas.

Local names: Alamáng (Sul.); alipásio (Bik.); bagid-bágid (C. Bis.); kalúlit (Bag.); liásim (Bik.); malabúgna (Buk.); malaugkági (Mbo.); salingúbud (Buk.); sunoaglang (C. Bis.).

OREOCNIDE TRINERVIS (Wedd.) Miq. Fl. Ind. Bat. 1² (1858-59) 270; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 17.

Villebrunea trinervis Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 196, DC. Prodr. 16¹ (1869) 235²; F.-Vill. Novis. App. (1880) 206; Vidal Sinopsis Atlas (1883) 40, t. 89, f. E.; Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 258; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 49, 3 (1908) Bot. 404.

Batan Islands to Mindanao. In thickets and forests, especially along streams at low and medium altitudes. Formosa, Borneo.

Local names: Alilaua (Neg.); gendéranon (Ilk.); kasúy (Iv.).

EXCLUDED SPECIES

VILLEBRUNEA CRENULATA Gaudich.; Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 196.

"Ins. Philip.?" Weddell l. c. This is the Hawaiian *Urera sandwicensis* Wedd.

19. LEUCOSYKE Moritzi

LEUCOSYKE ASPERA C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 23.

Luzon (Camarines, Albay), Sibuyan, Panay, *B. S. 2915 Mearns, 22109 Ramos, 30744 Ramos & Edaño, Elmer 12261*. In forests, altitude about 1,000 m. Endemic.

LEUCOSYKE BRUNNESCENS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 25.

Luzon (Cagayan, Ilocos Sur, Pangasinan, Nueva Vizcaya), *B. S. 7821 Ramos, 11388, 11386, 11387, 11499, 11385 McGregor, 17718 Otones, 26214 Ramos & Edaño*. In thickets at low and medium altitudes. Endemic.

LEUCOSYKE CAPITELLATA (Poir.) Wedd. in DC. Prodr. 16¹ (1869) 235²; F.-Vill. Novis. App. (1880) 206; Vidal Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 258; Merr. in Philip. Bur. Forestry Bull. 1 (1903) 19, Philip. Journ. Sci. 1 (1906) Suppl.

49, 3 (1908) Bot. 405; Elm. Leaf. Philip. Bot. 3 (1910) 900 (var. *villosa* Wedd.); C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 27. *Urtica capitellata* Poir. in Lam. Encycl. Suppl. 4 (1816) 227. *Leucosyke alba* Zoll. & Mor. Syst. Verz. Ind. Arch. (1845) 100; Miq. Fl. Ind. Bat. 1² (1858-59) 265; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 19.

Missiessya fagifolia Gaudich. Bot. Voy. Bonite (1844) t. 93; Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 195.

Throughout the Philippines in thickets, second-growth forests, etc., at low and medium altitudes; common. Formosa to Java and New Guinea.

Local names: Alagási (Bis., Tag.); alangási (Bis.); amagási (Bik., Tag.); anagau (Bik.); anugas (Bik.); alalási (Bon., Ilk.); aragási (Bik., S. L. Bis.); ararási (Bon.); arási (Bon.); bahibáhi (P. Bis.); bauáua (S. L. Bis.); bilanbılan (Sub.); bunkılan (Yak.); damakadiós (P. Bis.); gasi-gási (Sul.); ginagási (Tag.); gugútu (Ig.); haganási (Bik.); hanlagási (Tag.); hilagási (Tag.); hinagási (Tag.); hinlagási (P. Bis.); isís ngípin (Tag.); karikasin (Neg.); lagási (Tag., C. Bis.); laglág (P. Bis.); lalási (Ig.); lañgási (Bis.); lapsik (Ig.); layásin (Tag.); liásin (Tag.); manombíla (Buk.); sagombibílan (Mbo.); salagíso (Bik.); salási (Bon.); tinagási (Bik.).

Var. **CELTIDIFOLIA** (Gaudich.) Wedd. in DC. Prodr. 16¹ (1869) 235²³; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 28.

Missiessya celtidifolia Gaudich. Bot. Voy. Bonite (1844) t. 93, f. 12-20; Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 195; Blume Ann. Mus. Bot. Lugd.-Bat. 2 (1856) 163.

Missiessya aspera Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 195; Blume l. c.

Leucosyke celtidifolia Miq. Fl. Ind. Bat. 1² (1858-59) 266.

Luzon (Ilocos Norte south to Cavite, Batangas, and Laguna), Panay. In thickets and on exposed ridges at medium altitudes, in Benguet ascending to at least 2,000 m. Intermediate forms connect it with the type. Endemic.

LEUCOSYKE HISPIDISSIMA (Wedd.) Miq. Fl. Ind. Bat. 1² (1858-59) 265; Wedd. in DC. Prodr. 16¹ (1869) 235²³; F.-Vill. Novis. App. (1880) 206; Vidal Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 258; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 24.

Missiessya hispidissima Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 195.

Luzon (Bontoc, Benguet, Nueva Ecija), *Elmer* 5906, 6083, 8974, *Williams* 1017, *B. S.* 30005 *Fénix*. In thickets up to an altitude of 1,400 m. Endemic.

Local names: Dai (Ig.); lapli (If.).

LEUCOSYKE LEYTENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 269.

Leyte, *Wenzel* 1061, *B. S.* 15306 *Ramos*. In forests at low and medium altitudes. Endemic.

LEUCOSYKE MAGALLANENSIS Elm. Leaf. Philip. Bot. 2 (1910) 677; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 25.

Sibuyan, *Elmer* 12282. On forested river banks, altitude about 1,000 m. Endemic. Very close to *Leucosyke hispidissima* Miq.

LEUCOSYKE MINDORENSIS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 22.

Mindoro, *F. B. 11461 Merritt*. In forests, altitude about 600 m. Endemic.

LEUCOSYKE NEGROSENSIS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 27.

Panay, Negros, Palawan, Mindanao (Butuan), *F. B. 4316 Everett, B. S. 32516, 32587 McGregor, 15897 Fénix, Merrill 9211*. In forests at low and medium altitudes. Endemic.

LEUCOSYKE NIVEA C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 21.

Leucosyke candidissima Merr. in Philip. Journ. Sci. 3 (1908) Bot. 130, non Wedd.

Leyte, Mindanao (Lanao), *Wenzel 872, B. S. 15250 Ramos, Clemens 1142*. In forests, altitude 500 to 800 m. Endemic.

LEUCOSYKE OVALIFOLIA C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 26.

Luzon (Zambales), Culion, Palawan, *Merrill 481, 706, 9455, Elmer 12598*. In dry thickets and open forests at low altitudes. Endemic.

Local name: Andarása (Tagb.).

LEUCOSYKE QUADRINERVIA C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 28.

Batan and Babuyan Islands, *B. S. 3752, 3653, 4134 Fénix*. Along streams at low altitudes. Endemic. Closely allied to *Leucosyke capitellata* Wedd.

Local name: Vuhuan (Iv.).

20. MAOUTIA Weddell

MAOUTIA SETOSA Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 194, DC. Prodr. 16¹ (1868) 235[∞]; Miq. Fl. Ind. Bat. 1² (1858-59) 274; F.-Vill. Novis. App. (1880) 206; Vidal Sinopsis Atlas (1883) 40, t. 89. f. F, Rev. Pl. Vasc. Filip. (1886) 259; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 20; Elm. Leaf. Philip. Bot. 3 (1910) 900.

Maoutia platystigma Wedd. in Ann. Sci. Nat. Bot. IV 1 (1854) 194, Arch. Mus. Paris 9 (1857) 481, t. 16, B, f. 10, DC. Prodr. 16¹ (1869) 235[∞]; Miq. Fl. Ind. Bat. 1² (1858-59) 274; F.-Vill. Novis. App. (1880) 206; Vidal Phan. Cuming. Philip. (1885) 147, Rev. Pl. Vasc. Filip. (1886) 258.

Northern Luzon to Mindanao. In forests and thickets, in some regions at low and medium altitudes; ascending to 2,200 m in Benguet. Bote! Tobago.

Local names: Alayan (Bag.); danlásan (C. Bis.); labái (Bon.); lai (Ig.); lai-i (If.); marasiñgáu (Neg.); patikán (Ig.); pinúan (Ig.); tab-tabáku (Ig.).

21. ASTROTHALAMUS C. B. Robinson

ASTROTHALAMUS RETICULATUS (Wedd.) C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 19.

Maoutia reticulata Wedd. in DC. Prodr. 16¹ (1869) 235[∞]; F.-Vill. Novis. App. (1880) 206; Vidal Rev. Pl. Vasc. Filip. (1886) 259.

Maoutia ? planitora C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 180.

Mindanao (Zamboanga), *Copeland, Williams 2079, B. S. 36774 Ramos & Edaño*. In thickets at low altitudes. Borneo, Marianne Islands. A monotypic genus.

Local name: Lapnái (Sub.).

PROTEACEAE

1. *HELICIA* Loureiro

HELICIA ARTOCARPOIDES Elm. Leaf. Philip. Bot. 5 (1913) 1826.

Palawan, Mindanao (Zamboanga), *Elmer 12946, B. S. 37448 Ramos & Edaño*. On forested ridges, altitude about 600 m. A remarkable species, allied to *Helicia incisa* Koord. & Val., of Java. Endemic.

Local name: Gunsili (Sub.).

HELICIA CUMINGIANA Presl Epim. (1851) 246; Meisn. in DC. Prodr. 14 (1857) 440; Miq. Fl. Ind. Bat. 1^a (1858) 986; F.-Vill. Novis. App. (1880) 182; Vidal Phan. Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 229; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 49.

Helicia philippinensis Meisn. in DC. Prodr. 14 (1857) 441; Miq. Fl. Ind. Bat. 1^a (1858) 987; F.-Vill. Novis. App. (1880) 182; Vidal Phan. Cuming. Philip. (1885) 140, Rev. Pl. Vasc. Filip. (1886) 229, Synopsis Atlas (1883) 37, t. 79; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 49.

Throughout the Philippines in forests at medium altitudes, on some mountains ascending to 1,800 m altitude. With a very large series of specimens from all parts of the Philippines, I fail to find any constant distinguishing characters between *Helicia cumingiana* Presl and *H. philippinensis* Meisn. Endemic.

Local names: Apápid (Klg.); biskóng (Ig.); chamosil (Ig.); lákot (Tag.); lóban (Bon.); malaantigau (S. L. Bis.); manluáb (Tag.); olét (Ig.); olitan (Ig.); putólan (Tag.); tarangisia (Bag.); uátan (Ig.); uátén (Ig.); ulátén (Ig.).

Var. *PARVIFOLIA* var. nov.

A typo differt foliis minoribus, 5 ad 12 cm longis, 1.5 ad 3 cm latis.

Luzon (Bontoc, Lepanto, Benguet, Laguna, Zambales), Mindoro, *F. B. 18375 Alvarez, 5028 Curran, B. S. 31713 Santos*. On exposed ridges, altitude 1,700 to 2,400 m. Endemic.

HELICIA GRACILIFLORA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 132.

Mindanao (Lanao), *Clemens*. Altitude about 700 m. Endemic.

HELICIA INTEGRALIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 301.

Luzon (Laguna, Bataan), *B. S. 15127 Ramos, Merrill Phil. Pl. 1128, Whitford 171, 476, 460*. In damp forests at medium altitudes, on Mt. Mariveles, occurring on exposed ridges, altitude 950 to 1,100 m. Endemic.

HELICIA INTEGRIFOLIA Elm. Leaf. Philip. Bot. 8 (1915, March 27) 2798.

Helicia longiflora Merr. in Philip. Journ. Sci. 10 (1915, Sept. 18) Bot. 300.

Luzon (Tayabas, Laguna, Rizal, Bataan), Mindanao (Agusan), *Elmer 13392, Whitford 982, B. S. 29351 Ramos & Edaño, Merrill Phil. Pl. 305,*

F. B. 23472 Villamil, Williams 426. In forests at medium altitudes. Endemic.

Local names: Salímai (Mbo.); salimaysímai (Mbo.).

HELICIA LORANTHOIDES Presl Epim. (1851) 247; Miq. Fl. Ind. Bat. 1^a (1858) 984; Meisn. in DC. Prodr. 14 (1857) 438; F.-Vill. Novis. App. (1880) 182; Vidal Phan. Cuming. Philip. (1885) 140, Rev. Pl. Vasc. Filip. (1886) 229.

Luzon (Nueva Vizcaya, Tayabas, Sorsogon, Albay), Catanduanes, Mindoro, Mindanao, *Cuming* 850, *B. S.* 23660, 30202, 38969, 38715, 38879 *Ramos & Edaño*, 8203, 39591 *Ramos*, *Elmer* 9223, 11840. In forests at medium altitudes. Endemic.

Local names: Anaping-labláb (Buk.); tarangísi (Bag.).

HELICIA OLIGOPHLEBIA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 6.

Luzon (Sorsogon), Leyte, *B. S.* 23320, 23632, 15285 *Ramos*. In forests at medium altitudes. Closely allied to *Helicia cumingiana* Presl. Endemic.

HELICIA PAUCINERVIA Merr. in Philip. Journ. Sci. 17 (1920) 247.

Mindanao (Surigao), *B. S.* 34610 *Ramos & Pascasio*. On river banks, altitude about 300 m. Endemic.

EXCLUDED SPECIES

HELICIA CASTANEAEOFOLIA Meisn. in DC. Prodr. 14 (1857) 441; Miq. Fl. Ind. Bat. 1^a (1858) 986; F.-Vill. Novis. App. (1880) 182.

The type of this species, *Cuming* 2338, was from Malacca, not from the Philippines.

HELICIA ROBUSTA Wall.; F.-Vill. Novis. App. (1880) 182.

HELICIA SERRATA R. Br.; F.-Vill. l. c.

LORANTHACEAE

1. ELYTRANTHE Blume

ELYTRANTHE ACUÑAE Merr. in Philip. Journ. Sci. 13 (1918) Bot. 279.

Mindanao (Lanao), *F. B.* 23386 *Acuña*. In forests at low altitudes. Endemic.

ELYTRANTHE COCHINCHINENSIS (Lour.) G. Don Gen. Syst. 3 (1834) 425.

Loranthus cochinchinensis Lour. Fl. Cochinch. (1790) 195.

Loranthus globosus Roxb. Fl. Ind. 2 (1824) 206; F.-Vill. Novis. App. (1880) 184; Vidal Rev. Pl. Vasc. Filip. (1886) 230.

Loranthus ampullaceus Roxb. Fl. Ind. 2 (1824) 209; DC. Prodr. 4 (1830) 296; Hook. f. Fl. Brit. Ind. 5 (1886) 220; F.-Vill. Novis. App. (1880) 184; Vidal Phan. Cuming. Philip. (1885) 141; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 145.

Elytranthe globosa G. Don Gen. Syst. 3 (1834) 426; Gamble in Journ. As. Soc. Beng. 75^a (1914) 377.

Elytranthe ampullacea Engl. Nat. Pflanzenfam. 3¹ (1889) 188; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 50, Merr. Sp. Blancoanae (1918) 132.

Hillia longiflora Blanco Fl. Filip. (1837) 235, ed. 2 (1845) 165, ed. 3, 1 (1877) 297, t. 444.

Luzon (Zambales, Nueva Ecija, Bataan, Rizal, Laguna, Cavite), Palawan, Mindanao, *Merrill Sp. Blancoanae* 1033, *Cuming* 1951, 1963, *B. S.* 26206, 22568 *Ramos*, *Elmer* 17508, 17745. On trees at low and medium altitudes. India to Indo-China and Malaya.

Local names: Dalápun (Sbl.); magaupanga (Buk.).

ELYTRANTHE ELMERI (Merr.) comb. nov.

Loranthus elmeri Merr. in Philip. Journ. Sci. 9 (1914) Bot. 285.

Palawan, *Elmer* 12749, 13138. On trees in forests. Endemic.

2. LEPEOSTEGERES Blume

LEPEOSTEGERES ALTERNIFOLIUS (Merr.) comb. nov.

Loranthus alternifolius Merr. in Philip. Journ. Sci. 9 (1914) Bot. 283.

Mindanao (Zamboanga), *F. B.* 13295 *Foxworthy*, *De Mesa*, & *Villamil*. In forests at low altitudes. Endemic.

LEPEOSTEGERES AMPLIFOLIUS (Merr.) comb. nov.

Loranthus amplifolius Merr. in Philip. Journ. Sci. 13 (1918) Bot. 277.

Samar, *B. S.* 17448 *Ramos*. In damp forests at low altitudes. Endemic.

LEPEOSTEGERES BANAHAENSIS (Elm.) comb. nov.

Loranthus banahaensis Elm. Leaf. Philip. Bot. 1 (1908) 288, 3 (1911) 1075, 6 (1913) 1960; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 145.

Loranthus laguncensis Merr. in Philip. Journ. Sci. 9 (1914) Bot. 281.

Luzon (Tayabas, Laguna), Mindanao (Agusan, Davao), *Elmer* 9115, 14065, 10479, *B. S.* 15064 *Ramos*. In forests up to an altitude of 750 m. Endemic.

Local names: Kandaian (Mbo.); manago (Bag.).

LEPEOSTEGERES CAPITULIFERUS (Merr.) comb. nov.

Loranthus capituliferus Merr. in Philip. Journ. Sci. 7 (1912) Bot. 264.

Mindanao (Zamboanga), *Merrill* 8270. In damp forests, altitude about 1,100 m. Endemic.

LEPEOSTEGERES CONGESTIFLORUS (Merr.) comb. nov.

Loranthus congestiflorus Merr. in Philip. Journ. Sci. 4 (1909) Bot. 147, 5 (1910) Bot. 345; Elm. Leaf. Philip. Bot. 3 (1911) 1076.

Luzon (Benguet), Mindoro, Negros, Mindanao, *F. B.* 5037, 10833 *Curran*, *B. S.* 8888, 8833 *McGregor*, *Merrill* 6597, *Phil. Pl.* 221, *Lohr* 4459, *Elmer* 10634. In the mossy forest on the higher mountains, ascending to 2,300 m. Endemic.

Local names: Alsibaét (Ig.); manágo (Bag.).

LEPEOSTEGERES OVATIBRACTEUS (Merr.) comb. nov.

Loranthus ovatibracteus Merr. in Philip. Journ. Sci. 13 (1918) Bot. 278.

Samar, *B. S.* 24135 *Ramos*. In damp forests at low altitudes. Endemic.

LEPEOSTEGERES TETRANTHUS (Merr.) comb. nov.

Loranthus tetranthus Merr. in Philip. Journ. Sci. 7 (1912) Bot. 79.

Luzon (Bontoc), *Vanoverbergh* 1294. On trees, altitude 1,650 m. Endemic.

LEPEOSTEGERES WILLIAMSII (Merr.) comb. nov.

Loranthus williamsii Merr. in Philip. Journ. Sci. 4 (1909) Bot. 148.

Luzon (Benguet), *Williams 973, Merrill Phil. Pl. 1784*. On *Ficus* and other trees, altitude about 1,300 m. Endemic.

3. LORANTHUS Linnaeus**LORANTHUS ACUMINATISSIMUS** Merr. in Philip. Journ. Sci. 4 (1909) Bot. 143.

Luzon (Benguet), *B. S. 5700 Ramos*. Endemic.

LORANTHUS ACUTUS (Van Tiegh.) Engl. Nat. Pflanzenfam. Nachtr. 1 (1897) 128; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 135.

Stemmatophyllum acutum Van Tiegh. in Bull. Soc. Bot. France 41 (1894) 546.

Luzon (Ifugao, Bontoc, Benguet, Nueva Ecija), *Cuming 1973, Merrill 4377, 9701, B. S. 31867 Santos, Elmer 5809, Williams 1021, Vanoverbergh 221, 1782*. On trees, altitude 1,000 to 2,200 m. Endemic.

Local names: Bayánag (Tag.); saga (Ig.); takín (Bon.); takí-talakitag (Bon.); takták (Ig.); talakitak (Bon.).

LORANTHUS AGUSANENSIS Elm. Leaf. Philip. Bot. 6 (1913) 1962.

Mindanao (Agusan), *Elmer 13405*. In dense forests, altitude about 150 m. Endemic.

Local name: Kasandígan (Mbo.).

LORANTHUS AHERNIANUS Merr. in Philip. Journ. Sci. 1 (1908) Suppl. 184, 4 (1909) Bot. 143.

Luzon (Rizal, Zambales), *B. S. 5115 Ramos, F. B. 2140 Ahern's collector*. Endemic.

LORANTHUS ANGULATUS Elm. Leaf. Philip. Bot. 3 (1911) 1074.

Mindanao (Davao), *Elmer 10804*. On *Grewia* in forests, altitude about 800 m. Endemic.

Local name: Manágo (Bag.).

LORANTHUS APOENSIS Elm. Leaf. Philip. Bot. 3 (1911) 1073.

Mindanao (Davao), *Elmer 11454*. On trees in the mossy forest, altitude about 2,100 m. Endemic.

Local name: Manágo (Bag.).

LORANTHUS APPENDICULATUS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 78.

Cleistoloranthus verticillatus Merr. in Philip. Journ. Sci. 4 (1909) Bot. 150, 5 (1910) Bot. 345, non *Loranthus verticillatus* Ruiz & Pav.

Luzon (Bontoc, Benguet), *F. B. 16229 Curran, Merritt, & Zschokke, Vanoverbergh 1293*. On trees, altitude 1,600 to 2,400 m. Endemic.

LORANTHUS AURANTIACUS Elm. Leaf. Philip. Bot. 6 (1913) 1967.

Mindanao (Agusan), *Elmer 13774*. On trees in forested ravines, altitude about 900 m. Endemic.

Local name: Tagdóan (Mbo.).

LORANTHUS BASILANENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 134.

Mindanao, Basilan, *F. B. 3447 Hutchinson, Hallier, Copeland, 376*. On trees at low altitudes. Endemic.

LORANTHUS BENGUETENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 134, 5 (1910) Bot. 345.

Luzon (Bontoc, Benguet), *F. B. 6064 Curran, Merritt, & Zschokke, B. S. 2712 Mearns, Vanoverbergh 1098, 3641*. On *Pinus insularis* Endl., altitude 1,200 to 1,600 m. Endemic.

Local name: Taki-ti-talakítag (Bon.).

LORANTHUS BICOLORATUS Elm. Leaf. Philip. Bot. 2 (1908) 470; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 137.

Negros, Mindanao (Butuan), *Elmer 9950, Weber 1033*. On *Leucosyke* and other trees at low and medium altitudes. Endemic.

Local name: Manoag (P. Bis.).

LORANTHUS BOHOLENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 141. Bohol, *B. S. 1277 McGregor*. On trees near the seashore. Endemic.

LORANTHUS CAULIFLORUS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 185, 4 (1909) Bot. 136; Elm. Leaf. Philip. Bot. 6 (1913) 1960.

Mindanao (Agusan, Bukidnon, Lanao), *Clemens 55, Elmer 13773, B. S. 21380 Escritor*. On trees at medium altitudes. Endemic.

Local names: Kasili (Buk.); tagdóan (Mbo.).

LORANTHUS CLEMENTIS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 185, 4 (1909) Bot. 140.

Mindanao (Lamao), *Clemens*. On trees, altitude about 700 m. Endemic.

LORANTHUS CONFERTIFLORUS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 273.

Leyte, *Wenzel 1249*. On trees in forests. Endemic.

LORANTHUS CONFUSUS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 261.

Luzon (Ilocos Norte, Union, Benguet, Pangasinan, Tarlac), *Cuming 1959, B. S. 12951 Fénix, 4977, 27202 Ramos, Elmer 5711*. On trees in thickets and thin forests at low and medium altitudes. Endemic.

Local name: Tagasling (Ilk.).

LORANTHUS COPELANDII Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 186, 4 (1909) 140, 5 (1910) Bot. 345.

Luzon (Benguet), *Merrill 4407, F. B. 16232, 18176 Curran, Merritt, & Zschokke*. On trees, altitude 1,100 to 1,600 m. Endemic.

LORANTHUS CRASSILIMBUS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 274.

Luzon (Nueva Ecija, Rizal), Panay, *B. S. 26409, 30724, 29654 Ramos & Edaña*. On trees in forests at medium altitudes. Endemic.

LORANTHUS CUERNOSENSIS Elm. Leaf. Philip. Bot. 2 (1908) 469; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 138.

Luzon (Tayabas, Laguna, Camarines, Albay), Samar, Biliran, Leyte, Negros, Mindanao. *Elmer 9525, 15292 (L. sorsogonensis Elm.), 14984 (L. fici Elm.), Merrill 6996, Phil. Pl. 1136, B. S. 28998, 28800 Ramos & Edaña, 10965, 22179, 17394 Ramos*. In forests at low and medium altitudes. Endemic.

Local names: Hinti-hinti (Tag.); magaupañga (Buk.); manau (Sul.); manóog (S. L. Bis.).

LORANTHUS CURRANII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 144, 5 (1910) Bot. 345.

Luzon (Benguet), *F. B. 5035 Curran, 18143 Curran, Merritt, & Zschokke*. On *Podocarpus*, in the mossy forest, at an altitude of about 2,250 m. Endemic.

LORANTHUS CURTIFLORUS Elm. Leaf. Philip. Bot. 6 (1913) 1964.

Mindanao (Agusan), *Elmer 14089*. In the mossy forest on exposed peaks, altitude about 1,800 m. Endemic.

Local name: Imbái (Mbo.).

LORANTHUS DEMESAE Merr. in Philip. Journ. Sci. 9 (1914) Bot. 280.

Mindanao (Zamboanga), *F. B. 13788 Foxworthy, De Mesa, & Villamil*. On trees in forests at low altitudes. Endemic.

LORANTHUS EDANOII Merr. in Philip. Journ. Sci. 13 (1918) Bot. 275.

Luzon (Nueva Ecija), *B. S. 26241 Ramos & Edaña*. On trees in forests at low altitudes; closely allied to *Loranthus cuernosensis* Elm. Endemic.

LORANTHUS EUCALYPTIPHYLLUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 444.

Luzon (Bontoc), *Vanoverbergh 1505*. On trees, altitude about 900 m. Endemic.

LORANTHUS FALCATIFOLIUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 286.

Mindanao (Bukidnon), *B. S. 15746 Félix*. On trees in forests. Endemic.

Local name: Magopango (Buk.).

LORANTHUS FENICIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 281.

Mindanao (Davao), *B. S. 15852 Félix*. On trees at low altitudes. Endemic.

LORANTHUS FERRUGINEUS Roxb. Fl. Ind. 2 (1824) 188; DC. Prodr. 4 (1830) 299; Jack in Hook. Bot. Miscel. 1 (1830) 279, t. 49; Hook. f. Fl. Brit. Ind. 5 (1886) 210; Usteri Beitr. Ken. Philip. Veg. (1905) 125; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 140.

Palawan, *Merrill 705, 9262, Elmer 12905, B. S. 15534 Félix, 203 Bermejós*. On trees in thickets and open forests at low altitudes. Malay Peninsula, Sumatra, Java, Borneo.

LORANTHUS FORMICARIUS Elm. Leaf. Philip. Bot. 3 (1911) 1069.

Mindanao (Davao), *Elmer 10304*. On trees in forests, altitude about 900 m. Endemic.

Local name: Manágo (Bag.).

LORANTHUS GEMINATUS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 146.

Mindanao (Surigao), *Merrill 5444*. On trees along tidal streams. Endemic.

LORANTHUS HAENKEANUS Presl ex Schultes Syst. 7 (1829) 113; DC. Prodr. 4 (1830) 304; F.-Vill. Novis. App. (1880) 184; Vidal Phan. Cuming. Philip. (1885) 140, Rev. Pl. Vasc. Filip. (1886) 231; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 144, Fl. Manila (1912) 184.

Loranthus malifolius Presl ex Schultes l. c.; DC. l. c.; F.-Vill. l. c.; Vidal Sinopsis Atlas (1883) 38, t. 81, f. B, Phan. Cuming. Philip. (1885) 140, Rev. Pl. Vasc. Filip. (1886) 232; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 459.

Scurrula haenkeana G. Don Gen. Syst. 3 (1834) 423.

Scurrula malifolia G. Don l. c.

Dendrophthoe haenkeana Miq. Fl. Ind. Bat. 1¹ (1856-57) 822.

Dendrophthoe malifolia Miq. l. c.

Candollina haenkeana Van Tiegh. in Bull. Soc. Bot. France 42 (1895) 269.

Candollina malifolia Van Tiegh. l. c.

Candollina barthei Van Tiegh. l. c.

Loranthus barthei Engl. Nat. Pflanzenfam. Nachtr. 1 (1897) 129.

Northern Luzon to Mindanao, on trees in open country, thickets, and forests at low and medium altitudes, ascending to 1,200 m. Endemic.

Local name: Kanónong (Ilk.).

LORANTHUS HALCONENSIS Merr. in Philip. Journ. Sci. 2 (1907) Bot. 271, 4 (1909) Bot. 143, 5 (1910) Bot. 345.

Luzon (Benguet), Mindoro, *Merrill 5664, F. B. 16230 Currán, Merritt, & Zschokke*. In wet forests, altitude 100 m in Mindoro, at higher altitudes in Benguet. Endemic.

LORANTHUS HALLIERI Merr. in Philip. Journ. Sci. 4 (1909) Bot. 140.

Mindanao (Zamboanga), Basilan, *Hallier, Merrill 8141, Elmer 12035, B. S. 16490 Reillo, 37455 Ramos & Edaña*. On trees at low altitudes. Endemic.

LORANTHUS HEXANTHUS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 137; Elm. Leaf. Philip. Bot. 3 (1911) 1073.

Mindanao (Lanao, Davao), *Clemens, Williams 2565, Elmer 10462*. On trees at medium altitudes. Endemic.

Local name: Manágo (Bag.).

LORANTHUS HOPEAE Merr. in Philip. Journ. Sci. 9 (1914) Bot. 279.

Mindanao (Zamboanga), *F. B. 13297 Foxworthy, De Mesa, & Villamil*. On *Hopea* in forests at low altitudes. Endemic.

LORANTHUS HUTCHINSONII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 138.

Mindanao, Palawan, *F. B. 4554 Mearns & Hutchinson, Merrill 9586*. On trees in forests, altitude 400 to 1,600 m. Endemic.

Local name: Dungebisa (Sub.).

LORANTHUS INCARNATIFLORUS Elm. Leaf. Philip. Bot. 6 (1913) 1970. *Loranthus incarnatus* Elm. op. cit. 3 (1911) 1070, non Jack.

Mindanao (Davao), *Elmer 11817*. On trees in forests, altitude about 1,400 m. Endemic.

Local name: Manágo (Bag.).

LORANTHUS LANAENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 136.

Mindanao (Lanao), *Clemens 777*. On trees overhanging Lake Lanao. Endemic.

- LORANTHUS LEYTENSIS** Merr. in Philip. Journ. Sci. 9 (1914) Bot. 278.
Leyte, *B. S.* 15243 *Ramos*. On trees in forests. Endemic.
- LORANTHUS LOHERI** Merr. in Philip. Journ. Sci. 4 (1909) Bot. 140.
Loranthus curvatus F.-Vill. Novis. App. (1880) 184; Vidal Phan. Cuming. Philip. (1885) 141, Rev. Pl. Vasc. Filip. (1886) 230, non Blume.
Luzon (Cagayan, Isabela, Ilocos Norte, Zambales, Rizal), Palawan, Cuming 1955, 1965, *Loher* 4481, *B. S.* 22744 *Castillo*, 27482 *Ramos*, *Merrill* 9432, 9437. On trees at low altitudes. Endemic.
Local names: Afuú (Ibn.); dáto (Neg.); kanónong (Ibn., Ilk.).
- LORANTHUS LONGITUBUS** Elm. Leaf. Philip. Bot. 6 (1913) 1961.
Mindanao (Agusan), *Elmer* 14053. On trees on exposed forested ridges, altitude about 1,000 m. Endemic.
Local name: Pisauan (Mbo.).
- LORANTHUS LUCIDUS** Merr. in Philip. Journ. Sci. 9 (1914) Bot. 277.
Luzon (Laguna), *B. S.* 16647 *Ramos*. In damp forests at medium altitudes. Endemic.
- LORANTHUS LUZONENSIS** Presl ex Schultes f. Syst. 7 (1829) 104; DC. Prodr. 4 (1830) 295; F.-Vill. Novis. App. (1880) 183; Vidal Phan. Cuming. Philip. (1885) 140, Rev. Pl. Vasc. Filip. (1886) 232; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 135.
Dendrophthoe luzonensis G. Don Gen. Hist. 3 (1834) 421; Miq. Fl. Ind. Bat. 1¹ (1856-57) 818.
Stemmatophyllum luzonense Van Tiegh, in Bull. Soc. Bot. France 41 (1894) 505.
? *Stemmatophyllum sessilifolium* Van Tiegh. in Bull. Soc. Bot. France 41 (1894) 506.
? *Loranthus sessilifolius* Engl. Nat. Pflanzenfam. Nachtr. 1 (1897) 128.
Luzon (Ilocos Norte, Ilocos Sur, Abra, Benguet, Zambales, Bataan), Cuming 1964, *B. S.* 27650, 32878, 7665, 7250 *Ramos*, *Elmer* 5693. On *Eugenia*, *Buchanania*, and other trees in thickets and open forests at low and medium altitudes. Endemic.
Local names: Kanónong (Ilk.); sumalin (Ting.).
- LORANTHUS MACGREGORII** Merr. in Philip. Journ. Sci. 4 (1909) Bot. 146.
Bohol, *B. S.* 1266 *McGregor*. On trees at low altitudes. Endemic.
- LORANTHUS MARITIMUS** Merr. in Philip. Journ. Sci. 9 (1914) Bot. 282.
Mindanao (Surigao), *B. S.* 15824 *Fénix*. On trees along the seashore. Endemic.
- LORANTHUS MEARNsii** Merr. in Philip. Journ. Sci. 2 (1907) Bot. 271, 4 (1909) Bot. 136.
Mindoro, *Merrill* 5733. On trees in forests, altitude about 1,800 m. Endemic.
- LORANTHUS MEDINILLICOLA** Merr. in Philip. Journ. Sci. 9 (1914) Bot. 287.
Luzon (Ifugao, Mt. Polis), *B. S.* 19842 *McGregor*. On *Medinilla* in the mossy forest. Endemic.

LORANTHUS MERRILLII Elm. Leaf. Philip. Bot. 3 (1911) 1068.

Luzon (Sorsogon), Mindanao (Davao), *Elmer 10617, 17328 (L. vulcanicus* Elm.). On trees (*Eurya* sp.) in forests, altitude about 1,800 m. Endemic.

Local name: Manágo (Bag.).

LORANTHUS MERRITTII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 134, Fl. Manila (1912) 184.

Stemmatophyllum nodosum Van Tiegh. in Bull. Soc. Bot. France 41 (1894) 506.

Loranthus nodosus Engl. Nat. Pflanzenfam. Nachtr. 1 (1897) 128, non Desr.

Luzon (Ilocos Norte, Pangasinan, Zambales, Bataan, Laguna, Rizal, Tayabas), Mindoro, Lubang, Sibuyan, *Merrill 960, 3494, Elmer 12412, Cuming 1952, 1958, Loher 4463, B. S. 33296 Ramos, F. B. 28365 Mabesa*. On trees (*Eugenia*, *Buchanania*, *Bruguiera*, etc.) at low altitudes. Endemic.

Local name: Lolóloi (P. Bis.).

LORANTHUS MINDANAENSIS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 186, 4 (1909) Bot. 142; Elm. Leaf. Philip. Bot. 3 (1911) 1070.

Leyte, Guimaras, Negros, Mindanao, *F. B. 101 Gammill, Clemens 545, Elmer 11995, 11996, Williams 2580, Weber 1460*. On trees at low and medium altitudes. Endemic.

Local name: Manágo (Bag.).

LORANTHUS MINIATUS Elm. Leaf. Philip. Bot. 6 (1913) 1966.

Mindanao (Agusan), *Elmer 13276*. On *Canarium*, forested ridges, altitude about 650 m. Endemic.

Local name: Payan (Mbo.).

LORANTHUS MIRABILIS Van Huerck & Muell.-Arg. in Act. Soc. Helv. Sci. Nat. 55 (1872) 47; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 187, 4 (1909) Bot. 135.

Stemmatophyllum cumingii Van Tiegh. in Bull. Soc. Bot. France 41 (1894) 505.

Loranthus cumingianus Engl. Nat. Pflanzenfam. Nachtr. 1 (1897) 128.

Luzon (Bataan, Rizal, Laguna), *Cuming 1966, Copeland, B. S. 16212, 15108 Ramos, 22862 McGregor*. On trees in forests. Endemic.

LORANTHUS OVATIFOLIUS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 133, 4 (1909) Bot. 143.

Mindanao (Lanao, Cotabato), *Clemens 1195, B. S. 11578 Robinson*. On trees at low altitudes. Endemic.

Local name: Magau (Mag.).

LORANTHUS PACHYCLADUS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 276.

Luzon (Ilocos Norte), *B. S. 27323, 32836 Ramos*. On trees in forests at low and medium altitudes. Endemic.

LORANTHUS PALAWANENSIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 279.

Loranthus fragilis Merr. in Philip. Journ. Sci. 9 (1914) Bot. 278, non Sprague.

Palawan, *Merrill 9248*. On *Vernonia* in forests at sea level. Endemic.

LORANTHUS PARASITICUS (Linn.) Merr. in Philip. Journ. Sci. 15 (1919) 232.

Scurrula parasitica Linn. Sp. Pl. (1753) 110 excl. syn. Camell et Petiver.

Loranthus scurrula Linn. Sp. Pl. ed. 2 (1762) 472, non auct. plur.

Loranthus estipitatus Stapf in Trans. Linn. Soc. Bot. 4 (1894) 221;

Merr. in Philip. Journ. Sci. 4 (1909) Bot. 139.

Luzon (Laguna, Tayabas, Rizal), Sibuyan, Palawan, *Cuming* 1970, *Elmer* 7911, 17546 *Merrill* 1826, 9396, *Phil. Pl.* 1020, *B. S.* 13517, 16526 *Ramos*. In forests at low altitudes. Southern China to the Malay Peninsula and Borneo.

LORANTHUS PENTAGONUS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 80.

Luzon (Bontoc), *Vanoverbergh* 1254. On trees in forests, altitude about 1,650 m. Endemic.

LORANTHUS PENTANDRUS Linn. Mant. 1 (1767) 63; DC. Prodr. 4 (1830) 305; Blume Fl. Jav. Loranth. (1828) 33, *t.* 10; Hook. f. Fl. Brit. Ind. 5 (1886) 216; F.-Vill. Novis. App. (1880) 184; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 141.

Loranthus shawianus Elm. Leaf. Philip. Bot. 5 (1913) 1807.

Luzon (Zambales), Palawan, *Cuming* 1962, *B. S.* 283 *Bermejos*, *Elmer* 12610. On trees at low and medium altitudes. India to southern China, southward to Sumatra, Java, and Borneo.

Local names: Agoago (Tag.); bogto (Tag.).

LORANTHUS PENTAPETALUS Roxb. Fl. Ind. 2 (1824) 211; DC. Prodr. 4 (1830) 295; Blume Fl. Jav. Loranth. (1828) 39, *t.* 14, 23A; Hook. f. Fl. Brit. Ind. 5 (1886) 206; F.-Vill. Novis. App. (1880) 183; Vidal Phan. Cuming. Philip. (1885) 140, Rev. Pl. Vasc. Filip. (1886) 231; Rolfe in Journ. Bot. 23 (1885) 215; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 50, 4 (1909) Bot. 133, 5 (1910) Bot. 345.

Lanthorus spicifer Presl Epim. (1851) 257; Walp. Ann. 2 (1852) 727; Van Tiegh. in Bull. Soc. Bot. France 41 (1894) 487.

Loranthus spicifer F.-Vill. Novis. App. (1880) 183; Vidal Phan. Cuming. Philip. (1885) 140, Rev. Pl. Vasc. Filip. (1886) 231; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 405.

Lanthorus cumingii Van Tiegh. in Bull. Soc. Bot. France 41 (1894) 488.

Loranthus cumingii Engl. Nat. Pflanzenfam Nachtr. 1 (1897) 128.

Helixanthera parasitica Lour. Fl. Cochinch. (1790) 142, non *Loranthus parasiticus* (Linn.) Merr.

Babuyan Islands to Mindanao. In forests at low and medium altitudes, ascending to 1,400 m. India to southern China, southward to Sumatra, Java, and Borneo.

Local names: Atóling (Ig.); dalamimo (Tag.); galamino (Tag.); katungau (Ig.); taki-ti-talakitag (Bon.).

LORANTHUS PHILIPPENSIS Cham. & Schlecht. in Linnæa 3 (1828) 204; DC. Prodr. 4 (1830) 302; Blanco Fl. Filip. ed. 2 (1845) 164, ed. 3, 1 (1877) 296; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 741; F.-Vill. Novis. App. (1880) 183; Vidal Rev. Pl. Vasc. Filip.

(1886) 231, Phan. Cuming. Philip. (1885) 140; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 84, 4 (1909) Bot. 139, Sp. Blancoanae (1918) 131.

Lonicera symphoricarpus Blanco Fl. Filip. (1837) 161, non Linn.

Loranthus pauciflorus Blanco Fl. Filip. (1837) 235, non Sw.

? *Loranthus tomentosus* Blanco op. cit. ed. 2 (1845) 164, ed. 3, 1 (1877) 296; F.-Vill. Novis. App. (1880) 184; Merr. Sp. Blancoanae (1918) 132, non Heyne.

Scurrula philippensis G. Don Gen. Syst. 3 (1834) 423.

Dendrophthoe philippensis Miq. Fl. Ind. Bat. 1^a (1856-57) 817.

Cichlanthus philippensis Van Tiegh. in Bull. Soc. Bot. France 42 (1895) 253.

Loranthus scurrula Linn. Sp. Pl. ed. 2 (1862) 472 p.p. quoad syn.

Camell; Schultes f. Syst. 7 (1829) 96 p.p. quoad syn. Camell.

Northern Luzon to Mindanao, on trees at low and medium altitudes; in Benguet ascending to 2,200 m, locally abundant. Endemic.

Local names: dápo, dápo káhoi (Tag.); komúnung (Ilk.); taká (Ig.).

LORANTHUS POLILLENSIS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 200.

Polillo, *B. S.* 10384 *McGregor*. On trees in forests. Endemic.

LORANTHUS PRESII Elm. Leaf. Philip. Bot. 6 (1913) 1969.

Mindanao (Agusan), *Elmer* 13741. In the mossy forest on exposed peaks, altitude about 1,600 m. Endemic.

Local name: Matauanuns (Mbo.).

LORANTHUS REVOLUTUS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 142.

Luzon (Ifugao, Zambales), *B. S.* 4785 *Ramos*, 19688 *McGregor*, *F. B.* 3252 *Curran & Merritt*. On trees in the mossy forest, altitude 1,800 to 2,100 m. Endemic.

LORANTHUS SACCATUS Elm. Leaf. Philip. Bot. 3 (1911) 1072.

Mindanao (Davao), *Elmer* 11747. On *Litsea* in forests, altitude about 1,200 m. Endemic.

Local name: Manágo (Bag.).

LORANTHUS SAMARENSIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 276.

Samar, Mindanao (Bukidnon), *B. S.* 24265 *Ramos*, 39159, 39188 *Ramos & Edaña*. In forests at low altitudes. Endemic.

LORANTHUS SECUNDIFLORUS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 187, 4 (1909) Bot. 142.

Luzon (Camarines) to Mindanao, *Merrill Phil. Pl.* 2053, *B. S.* 30442, 30535 *Ramos*, *Williams* 2695. On trees in forests at medium altitudes. Endemic.

Local names: Manágo (Bag.); mingagau (C. Bis.),

Var. **BOLSTERI** Elm. Leaf. Philip. Bot. 3 (1911) 1967.

Mindanao (Davao), *Elmer* 11701. In forests. Endemic.

LORANTHUS SERIATUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 285.

Mindanao (Zamboanga), *B. S.* 16424 *Reillo*. On trees at medium altitudes; allied to *Loranthus cauliflorus* Merr. Endemic.

LORANTHUS SESSILIFLORUS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 188, 4 (1909) Bot. 133.

Luzon (Bontoc, Benguet, Tayabas, Laguna), Mindoro, *Elmer* 6057, 7845, *Merrill* 1242, 4041, *B. S.* 28470, 28734, 37901 *Ramos & Edaña*. On trees in forests at low and medium altitudes, ascending to 1,000 m in Bontoc. Endemic.

LORANTHUS SIMILIS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 262.

Luzon (Benguet), *Williams* 984. On trees; allied to *Loranthus confusus* Merr. Endemic.

LORANTHUS SPHENOIDEUS Blume Fl. Jav. Loranth. (1828) 23, t. 4: F.-Vill. Novis. App. (1880) 184; Vidal Phan. Cuming. Philip. (1885) 140 p.p., Rev. Pl. Vasc. Filip. (1886) 231; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 139.

Northern Luzon to Mindanao. On trees at low and medium altitudes. *Elmer* 15252 (*L. nervosus* Elm.) is probably not distinct. Java, Celebes, and probably other parts of Malaya.

Local names: Kanúnung (Ilk.); loloilóloi (P. Bis.); taká (Ig.).

LORANTHUS SPRAGUEI Merr. in Philip. Journ. Sci. 13 (1918) Bot. 279.

Loranthus pubiflorus Merr. in Philip. Journ. Sci. 7 (1912) Bot. 263, non Sprague.

Luzon (Tayabas), *F. B.* 13086 *Curran*. On trees in forests at low altitudes. Endemic.

LORANTHUS SUBALTERNIFOLIUS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 188, 4 (1909) Bot. 141.

Amylothea cumingii Vaan Tiegh. in Bull. Soc. Bot. France 41 (1894) 264, non *Loranthus cumingii* Engl.

Elytranthe cumingii Engl. Nat. Pflanzenfam. Nachtr. 1 (1897) 126.

Luzon (Benguet, Sorsogon), *Cuming* 1969, *Elmer* 6191. On trees at medium altitudes. Endemic.

LORANTHUS SUBSESSILIS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 263.

Mindanao (Zamboanga), *Williams* 2425, *Merrill* 8315. On trees in damp forests, altitude 300 to 900 m. Endemic.

LORANTHUS SURIGAOENSIS Elm. Leaf. Philip. Bot. 6 (1913) 1966.

Mindanao (Agusan), *Elmer* 14098. On *Quercus* in wet forests, altitude about 2,000 m. Endemic.

LORANTHUS TENUIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 136.

Luzon (Bataan), *F. B.* 6287 *Curran*. On *Diospyros* in forests, altitude about 800 m. Endemic.

LORANTHUS TERMINALIFLORUS Elm. Leaf. Philip. Bot. 6 (1913) 1970.

Mindanao (Agusan), *Elmer* 14156. On trees in dense damp forests, altitude about 1,500 m. Endemic.

Local name: Anting-ánting (Mbo.).

LORANTHUS URDANETENSIS Elm. Leaf. Philip. Bot. 6 (1913) 1963.

Mindanao (Agusan), *Elmer* 14092. In the mossy forest on exposed peaks, altitude about 1,800 m. Endemic.

Local name: Sinangáan (Mbo.).

LORANTHUS VIRIDIS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 189, 4 (1909) Bot. 145.

Luzon (Bataan), *Cuming* 1953, *F. B.* 816, 1814, 2938 *Borden*, 6318 *Curran*. In forests, altitude 200 to 650 m. Endemic.

LORANTHUS WENZELII Merr. in Philip. Journ. Sci. 8 (1913) Bot. 370.

Leyte, *Wenzel* 24, 1739. In forests at low altitudes. Endemic.

LORANTHUS WORCESTERI Merr. in Philip. Journ. Sci. 9 (1914) Bot. 284.

Mindanao (Bukidnon), *B. S.* 15673 *Fénix*. In forests at low and medium altitudes. Endemic.

DOUBTFUL AND EXCLUDED SPECIES

LORANTHUS BICOLOR Roxb.; F.-Vill. Novis. App. (1880) 184.

LEPIDARIA BIFLORA Van Tiegh. in Bull. Soc. Bot. France 42 (1895) 441.

This was based on *Cuming* 1174; there is no proper description. It may prove to be the same as *Lepeostegeres williamsii* Merr.

LORANTHUS BLANCOANUS F.-Vill. Novis. App. (1883) 355; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 148.

Brabejum ? *caliculatum* Blanco Fl. Filip. ed. 2 (1845) 39, ed. 3, 1 (1877) 72; Merr. Sp. Blancoanae (1918) 383.

F.-Villar's binomial was based entirely on Blanco's description of *Brabejum caliculatum*. The species is unrecognizable except that it cannot possibly be a *Loranthus*.

LORANTHUS CARINULATUS Wall.; F.-Vill. Novis. App. (1880) 184.

LORANTHUS COCCINEUS Jack; F.-Vill. op. cit. 183.

LORANTHUS FASCICULATUS Blume; F.-Vill. op. cit. 184.

LORANTHUS FORMOSUS Blume; F.-Vill. l. c.

LORANTHUS FORSTERIANUS Schultes f.; Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 102.

LORANTHUS FUSCUS Blume; F.-Vill. Novis. App. (1880) 184.

LORANTHUS HETERANTHUS Wall. ?; Vidal Sinopsis Atlas (1883) 37, t. 81, f. A.

The exact identity of the species figured by Vidal is indeterminable; it is not Wallich's species.

DENDROPHTHOË INCARNATA Blume; Vidal Cat. Pl. Prov. Manila (1880) 40 = *Loranthus incarnatus* Jack.

This species does not extend to the Philippines; Vidal's specimen in all probability was *Loranthus haenkeanus* Presl.

LORANTHUS PALLENS Wall.; F.-Vill. Novis. App. (1880) 184.

LORANTHUS PULCHER DC.; F.-Vill. op. cit. 183.

LEPIDARIA QUADRIFLORA Van Tiegh. in Bull. Soc. Bot. France 42 (1895) 441.

This is based on *Cuming* 1171; I do not know its status, as Van Tieghem's description is entirely insufficient. It is some species of *Lepeostegeres*.

LORANTHUS RETUSUS Jack; F.-Vill. Novis. App. (1880) 184; Vidal Rev. Pl. Vasc. Filip. (1886) 232; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 149.

This was credited to Luzon on the basis of a specimen collected by Lobb and so labeled in the Kew Herbarium; Lobb's specimen certainly came from Singapore or the Malay Peninsula, not from the Philippines.

LORANTHUS SPHAEROCARPUS Blume; F.-Vill. Novis. App. (1880) 184.

LORANTHUS WALLICHIANUS Schultes f.; F.-Vill. op. cit. 183.

4. *PHRYGILANTHUS* Eichler

PHRYGILANTHUS OBTUSIFOLIUS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 189, 4 (1909) Bot. 151.

Luzon (Bataan), Mindanao (Agusan), *F. B. 1813 Borden, 6284 Curran, Whitford 134, 1081, Elmer 14192*. On trees in forests at medium altitudes. Endemic.

An American genus except for this species and a few in New Guinea, Australia, and New Zealand.

Local name: Lipuason (Mbo.).

5. *GINALLOA* Korthals

GINALLOA CUMINGIANA (Presl) F.-Vill. Novis. App. (1880) 185; Vidal Phan. Cuming. Philip. (1885) 141, Rev. Pl. Vasc. Filip. (1886) 232; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 153, 5 (1910) Bot. 345.

Viscum cumingianum Presl Epim. (1851) 255.

Luzon (Cagayan, Apayao, Nueva Vizcaya, Rizal), *Cuming 1968, B. S. 7829 Ramos, 11329 McGregor, 28258 Félix, 29376 Ramos & Edaño (forma latifolia)*. On trees in forests at low and medium altitudes. Endemic.

Var. *ANGUSTIFOLIA* Merr. in Philip. Journ. Sci. 4 (1909) Bot. 153.

Luzon (Ilocos Norte, Benguet, Nueva Vizcaya, Tayabas, Laguna), Negros, *Merrill Phil. Pl. 1150, B. S. 11324 McGregor, 27262 Ramos, F. B. 26780 Mabesa, 20680 Tamesis*. On various trees at low and medium altitudes, ascending to 1,200 m. Endemic.

GINALLOA LANCEOLATA C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 200.

Polillo, Luzon (Sorsogon), *B. S. 10429 McGregor, Elmer 15690*. On trees in forests at medium altitudes. Endemic.

6. *NOTOTHIXOS* Oliver

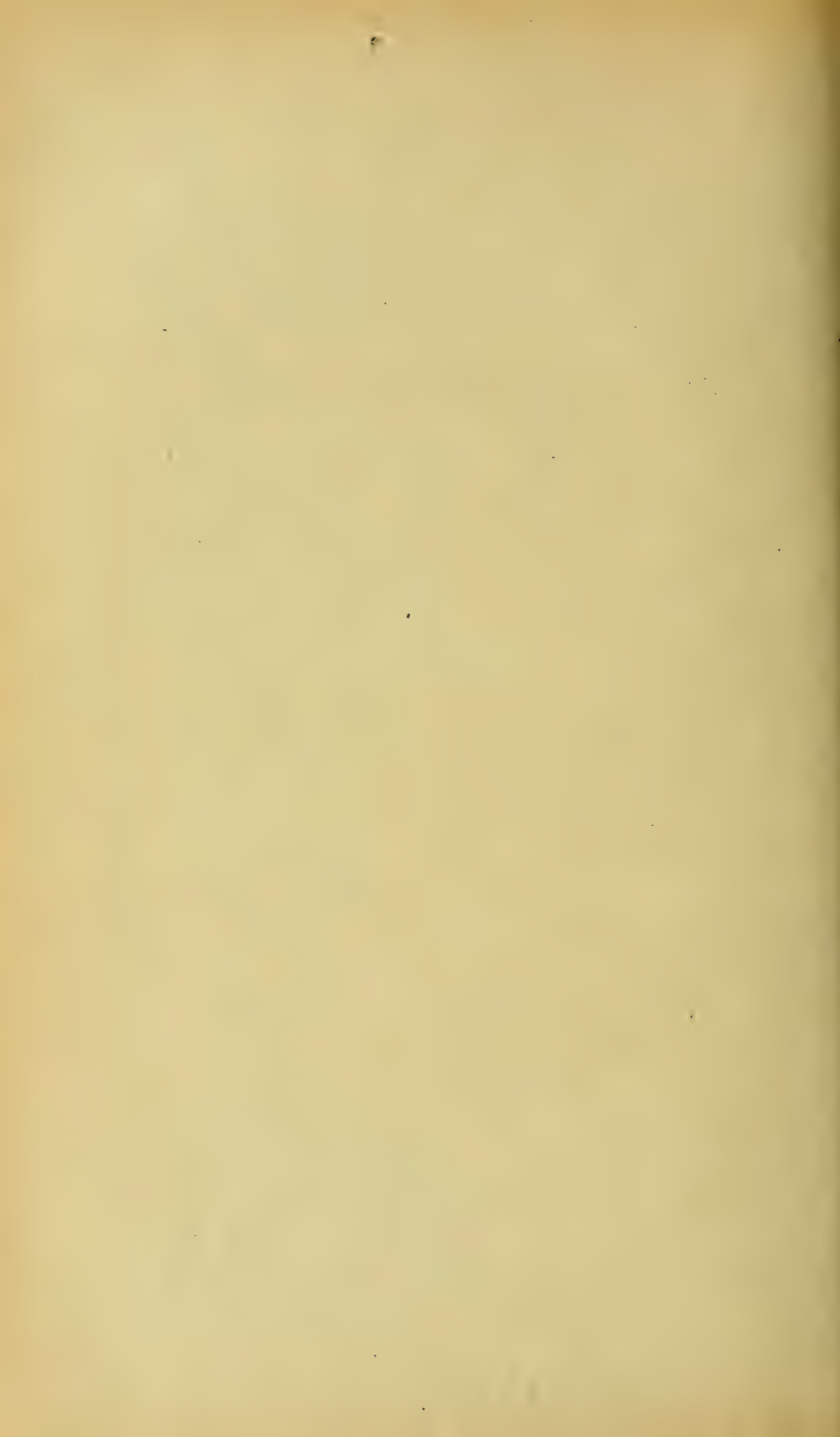
NOTOTHIXOS CURRANII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 152.

Luzon (Ilocos Norte, Bataan, Rizal), Sibuyan, Mindanao, *F. B. 12402 Curran & Merritt, Loher 6735, Elmer 12467, 14071, B. S. 29662 Ramos & Edaño, 32837 Ramos*. On trees in forests at medium altitudes. Endemic.

Local names: Anonúmpai (Mbo.); tabígit (P. Bis.).

NOTOTHIXOS PHILIPPINENSIS Elm. Leall. Philip. Bot. 2 (1908) 471; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 153.

Negros, Mindanao (Bukidnon), *Elmer 10114, F. B. 26541 Rola*. In forests, altitude 300 to 700 m. Endemic.



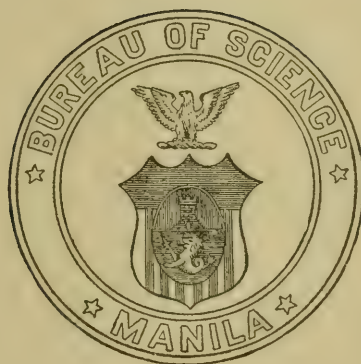
AN ENUMERATION OF PHILIPPINE FLOWERING PLANTS

BY

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EXPLANATORY NOTE

The present enumeration is an attempt to summarize in convenient form for consultation our present knowledge of Philippine flowering plants, and represents a part of the knowledge accumulated by the author during a course of about twenty years' study of the problem. In the work an attempt has been made to account for all binomials accredited to the Philippine flora; to adjust the synonymy when necessary; to include all important references to the Philippine botanical literature and essential references to extra-Philippine literature; to give the habitat, altitudinal range, and Philippine and extra-Philippine distribution of each species; to cite illustrative specimens where expedient or necessary; and to record all available local names for each species.

It is proposed to issue the present work in fascicles, utilizing one volume for the gymnosperms and the monocotyledons and two volumes for the dicotyledons. It is planned to publish full introductory and explanatory matter in a general introduction to be prefixed to Volume 1 when the entire enumeration is completed.

ELMER D. MERRILL.

MANILA, P. I., *August 25, 1921.*

NOTOTHIXOS SULPHUREUS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 152.

Mindanao (Zamboanga), *F. B. 9132 Whitford & Hutchinson, 13773 Foxworthy, De Mesa, & Villamil*. On trees in forests at low altitudes. Endemic.

7. BIFARIA Van Tieghem

BIFARIA OPUNTIA (Thunb.) comb. nov.

Viscum opuntia Thunb. Fl. Jap. (1784) 64; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 152.

Viscum japonicum Thunb. in Trans. Linn. Soc. 3 (1794) 329; Hook. f. Fl. Brit. Ind. 5 (1886) 228.

Bifaria japonica Van Tiegh. in Bull. Soc. Bot. France 43 (1896) 173.

Korthalsella japonica Engl. Nat. Pflanzenfam. Nachtr. 1 (1897) 138; Gamble in Journ. As. Soc. Beng. 75³ (1914) 384.

Pseudixus japonicus Hayata Ic. Pl. Formosa 5 (1915) 189, f. 64, Bot. Mag. Tokyo 30 (1916) 69.

Korthalsella bifaria Merr. in Bot. Mag. Tokyo 30 (1916) 68.

Luzon (Benguet, Zambales), Negros, *Merrill 9675, Loher 4475, B. S. 8403 McGregor, F. B. 8080, 16074 Curran & Merritt*. On various trees (*Adinandra, Eurya, Ilex, Eugenia*, and *Polyosma*), on exposed ridges and summits of the higher mountains. India to Japan southward to Malaya and Australia.

8. VISCUM Tournefort

VISCUM ANGULATUM Heyne ex DC. Prodr. 4 (1830) 283; Miq. Fl. Ind. Bat. 1¹ (1856-57) 806; Hook. f. Fl. Brit. Ind. 5 (1886) 225; F.-Vill. Novis. App. (1880) 184; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 151, Sp. Blancoanae (1918) 133.

Viscum capense Llanos Frag. Pl. Filip. (1851) 53; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 38, non Linn. f.

Viscum oxycedri Llanos ex F.-Vill. & Naves l. c., non DC.

Luzon (Ilocos Norte, Zambales, Bulacan), *Merrill Sp. Blancoanae 695, B. S. 7616, 72255 Ramos, F. B. 6943 Curran*. On trees in thickets and open forests at low altitudes. India to Malaya and northeastern Australia.

VISCUM ARTICULATUM Burm. f. Fl. Ind. (1768) 311; DC. Prodr. 4 (1830) 284; Hook. f. Fl. Brit. Ind. 5 (1886) 226; F.-Vill. Novis. App. (1880) 185; Ceron Cat. Pl. Herb. Manila (1892) 146; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 151, Sp. Blancoanae (1918) 133. *Viscum philippense* Llanos Frag. Pl. Filip. (1851) 52, p. p.; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 38 pp. *Viscum falcatum* Llanos in Mem. Acad. Cienc. Madr. 4 (1858) 501; F.-Vill. & Naves op. cit. 102, non Wall.

Northern Luzon to Mindanao. On trees at low and medium altitudes, ascending to 1,200 m in some regions. India to Formosa and Malaya.

Local names: Logólai (Bag.); taká (Ig.).

VISCUM LORANTHI Elm. Leaf. Philip. Bot. 8 (1919) 3089.

Luzon (Laguna), *Elmer 17777*. On *Loranthus* in secondary forests at low altitudes. Endemic.

VISCUM ORIENTALE Willd. Sp. Pl. 4 (1805) 224; DC. Prodr. 4 (1830) 278; Blume Fl. Jav. Loranth. (1828) *t.* 24, 25; F.-Vill. Novis. App. (1880) 184; Vidal Phan. Cuming. Philip. (1885) 141, Rev. Pl. Vasc. Filip. (1886) 232; Hook. f. Fl. Brit. Ind. 6 (1886) 224; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 151, Sp. Blancoanae (1918) 132. *Fusanus* ? *parasitus* Blanco Fl. Filip. ed. 2 (1845) 53, ed. 3, 1 (1877) 100; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 75. *Viscum philippense* Llanos Frag. Pl. Filip. (1851) 52 p. p.; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 38 p. p. *Viscum monoicum* Presl Epim. (1851) 251, non Roxb. *Viscum opuntoides* Cav. Ic. 6 (1801) 3, in nota, non Linn.

Luzon (Benguet to Tayabas), Lubang, Palawan. On various species of trees at low and medium altitudes. India to southern China southward to Australia.

Local name: Bogto (Tagb.).

SANTALACEAE

1. EXOCARPUS Labillardière

EXOCARPUS LATIFOLIA R. Br. Prodr. (1810) 356; A. DC. Prodr. 14 (1857) 688; Blume Mus. Bot. Lugd.-Bat. 1 (1850) 181, *f.* 37; Miq. Fl. Ind. Bat. 1¹ (1856-57) 781; F.-Vill. Novis. App. (1880) 184; Vidal Phan. Cuming. Philip. (1885) 141, Rev. Pl. Vasc. Filip. (1886) 232, Synopsis Atlas (1883) 38, *t.* 81, *f.* E.

Canopus luzonensis Presl Epim. (1851) 248.

Exocarpus luzonensis A. DC. Prodr. 14 (1857) 688; Miq. Fl. Ind. Bat. 1¹ (1858) 1096; Vidal Rev. Pl. Vasc. Filip. (1886) 232.

Henslowia heterantha Vidal Synopsis Atlas (1883) 38, *t.* 81, *f.* F, non Hook. f.

Luzon (Ilocos Norte, Zambales, Pangasinan), Culion, Palawan, Basilan, Jolo, Sibutu. Merrill 613, B. S. 5033, 7749, 27291 Ramos, F. B. 21576 Danao, 3801, 6952 Curran, 17890 Miranda. In dry forests and thickets at low altitudes; of very local occurrence. Java to New Guinea and Australia.

Local names: Agsum (Tagb.); kamiing (Pang.); magdaraláyap (Sbl.); suasua (Yak.); tulisán (Sul.); uksúr (Ilk.).

EXOCARPUS ROLFEANUS (O. Kuntze) Merr. in Philip. Journ. Sci. 4 (1909) Bot. 253.

Xylophyllos rolfeana O. Kuntze Rev. Gen. Pl. (1891) 589 (*rolfsiana*).

Palawan, Vidal 3647, F. B. 3852 Curran. In forests up to 300 m altitude. Endemic, unless identical with the Moluccan *Exocarpus epiphyllanthus* (Linn.) Merr. Interpret. Herb. Amb. (1917) 208.

EXCLUDED SPECIES

EXOCARPUS PHYLLANTHOIDES Endl.; F.-Vill. Novis. App. (1880) 185.

2. HENSLOWIA Blume

HENSLOWIA LOBBIANA A. DC. in DC. Prodr. 14 (1857) 631; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 50.

Luzon (Benguet, Bataan), Mindanao, Elmer 8987, 11296, 14063, Merrill 8269, F. B. 1200 Borden. On trees in forests, usually at medium altitudes but ascending to 1,400 m. Malay Peninsula, Penang.

Local names: Agotagot (Mbo.); kamiin (Sbl.); sigbut (Bag.); taka (Ig.).

HENSLOWIA PALAWANENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1834.

Palawan, *Elmer 12752*. In thickets at low altitudes. Endemic.

DOUBTFUL AND EXCLUDED SPECIES

HENSLOWIA BUXIFOLIA Blume; Usteri Beitr. Ken. Philip. Veg. (1905) 125.

To this species Usteri refers a specimen from Cebu; I have seen no Philippine material that I consider referable to Blume's species.

HENSLOWIA PHILIPPINENSIS A. DC. Prodr. 14 (1857) 631; Rolfe in Journ. Bot. 21 (1884) 287.

Dendrotrophe philippinensis Miq. Fl. Ind. Bat. 1^a (1858) 1096.

The type of this is *Cuming 2255*, from Malacca, not from the Philippines.

3. THESIIUM Linnaeus

THESIIUM PSILOTOIDES Hance in Journ. Bot. 6 (1868) 48; C. B. Rob. in Bull. Torr. Bot. Club. 35 (1908) 65.

Luzon (Bontoc, Benguet), *Williams 1310*, *Merrill 4347*, *Phil. Pl. 370*, *Vanoverbergh 408*. On open grassy slopes, altitude 1,200 to 1,500 m. Southern China.

EXCLUDED GENUS

SANTALUM ALBUM Linn.; Vidal Sinopsis Atlas (1883) *t. 81, f. C*.

Vidal's figure was drawn from Beddome; however, he states that he had received specimens of sandalwood from Balabac. No botanical material representing the genus has ever been collected in the Philippines.

OPILIACEAE

1. OPILIA Roxburgh

OPILIA AMENTACEA Roxb. Pl. Coromandel 2 (1798) 31, *t. 158*; Laws. in Hook. f. Fl. Brit. Ind. 1 (1875) 583; F.-Vill. Novis. App. (1880) 45; Vidal Sinopsis Atlas (1883) 20, *t. 30, f. B*, Rev. Pl. Vasc. Filip. (1886) 86; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 50.

Opilia fragrans Elm. Leaf. Philip. Bot. 5 (1913) 1824.

Luzon (Lepanto, Pangasinan, Rizal, Bataan, Camarines), Polillo, Culion, Palawan, *Merrill 596*, *Elmer 12691*, *B. S. 17826 Otanes*, *19294 Reillo*, *F. B. 23513 Alvarez*. In dry thickets and open forests at low and medium altitudes, especially near the sea. India, through Malaya to northeastern Australia.

Local names: Agaroiroi (P. Bis.); aratig (Tagb.).

2. CANSJERA Jussieu

CANSJERA RHEEDII Gmel. Syst. 1 (1791) 280; Mast. in Hook. f. Fl. Brit. Ind. 1 (1875) 582; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 265.

Cansjera scandens Roxb. Pl. Coromandel 2 (1798) 2, *t. 103*.

Cansjera malabarica Lam. Encycl. 3 (1791) 433.

Cebu, Basilan, Sulu Archipelago (Sibutu), *Merrill 5291*, *B. S. 11092*, *F. B. 18999 Miranda*. In thickets chiefly near the seashore, rare. India to southern China through Malaya to Australia.

3. CHAMPEREIA Griffith

CHAMPEREIA MANILLANA (Blume) Merr. in Philip. Journ. Sci. 7 (1912) Bot. 233, 11 (1916) Bot. 268, Fl. Manila (1912) 185, Sp. Blancoanae (1918) 133.

Cansjera manillana Blume Mus. Bot. Lugd.-Bat. 1 (1850) 246; Hallier f. in Meded. Rijks Herb. 1 (1911) 14.

Opilia manillana Baill. Adansonia 3 (1862) 124.

Opilia cumingiana Baill. l. c.

Gorantesia malalucban Llanos in Rev. Progr. Cienc. 15 (1865) 191; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 44.

Champereia griffithii Kurz Forest. Fl. Brit. Burma 2 (1877) 330; F.-Vill. Novis. App. (1880) 185; Vidal Sinopsis Atlas (1883) t. 81, f. D, Phan. Cuming. Philip. (1885) 141, Rev. Pl. Vasc. Filip. (1886) 232.

Champereia griffithiana Planch. ex Kurz in Journ. As. Soc. Beng. 44² (1875) 154; Hook. f. Fl. Brit. Ind. 5 (1886) 236.

Champereia cumingiana Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 50.

Batan Islands to Mindanao and Palawan. In thickets and dry second-growth forests at low and medium altitudes; common. Formosa to the Moluccas, and, including *C. griffithiana*, which is scarcely distinct, Burma and Tenasserim, Penang, and the Malay Peninsula.

Local names: Garimo (Tag.); ichikamanok (Tagb.); liongliong (Tag.); luingluing (Tag.); malakabuan (Tag.); malalukbán (Tag.); malaráyap (Tag.); marispáris (Tag.); panalayápin (Ilk.); panalayápon (Sbl.); su-lanmanok (Sub.); taminuk (Iv.).

CHAMPEREIA OBLONGIFOLIA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 177.

Samar, B. S. 17565, 24382, 24847 Ramos. In damp forests at low altitudes. Endemic.

CHAMPEREIA PLATYPHYLLA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 177.

Samar, B. S. 24248 Ramos. In damp forests at low altitudes. Endemic.

OLACACEAE

1. OLAX Linnaeus

OLAX IMBRICATA Roxb. Hort. Beng. (1814) 5, *nomen nudum*, Fl. Ind. 1 (1820) 169; DC. Prodr. 1 (1824) 532; Miq. Fl. Ind. Bat. 1² (1856-57) 785; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 305; F.-Vill. Novis. App. (1880) 45; Vidal Sinopsis Atlas (1883) 20, t. 30, f. A, Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 85; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 32, Philip. Journ. Sci. 1 (1906) Suppl. 51, 3 (1908) Bot. 80, Fl. Manila (1912) 185, Sp. Blancoanae (1918) 134.

Fissilia psittacorum Blanco Fl. Filip. (1837) 28, ed. 2 (1845) 20, ed. 3, 1 (1877) 38, t. 311, non Linn.

Northern Luzon to Mindanao. In thickets and thin forests at low and medium altitudes; rather common. India to Malaya.

Local names: Balagon (P. Bis.); bitón (Tag.); labnót (P. Bis.); mala-bágio (Tag.); malabútong (Tag.); ubet-ubet (Ilk.).

2. XIMENIA Plumier

XIMENIA AMERICANA Linn. Sp. Pl. (1753) 1193; DC. Prodr. 1 (1824) 533; Miq. Fl. Ind. Bat. 1^a (1856-57) 786; F.-Vill. Novis. App. (1880) 45; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 190, Interpret. Herb. Amb. (1917) 209.

Zizyphus littorea Teysm. ex Hassk. in Abh. Naturf. Gesellsch. Halle (1866) 176.

Luzon (Tayabas), Palawan, Biliran, Mindanao, Sulu Archipelago. In thickets immediately back of the beach along the seashore. A pantropic strand plant.

Local names: Pañguñgán (Yak.); paniuñgán (Sul.); sulo-súlo (Bag.).

3. STROMBOSIA Blume

STROMBOSIA PHILIPPINENSIS (Baill.) Rolfe in Journ. Bot. 23 (1885) 211; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 86; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 51.

Lavallea philippinensis Baill. Adansonia 2 (1862) 361.

Strombosia dubia Vidal Sinopsis Atlas (1883) 20, t. 30, f. D; Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 15.

Northern Luzon to Mindanao. In forests at low and medium altitudes, common. *Strombosia minor* Elm. (*Elmer 17538*) is merely a small-leaved form. Endemic, but apparently closely allied to the Javan *Strombosia lucida* Teysm.

Local names: Kamauyán (Tag.); kamayuán (Tag., S. L. Bis.); larág (Ilk.); larák (Ibn.); samayónan (Bik.); sumayuán (Tag.); tamahuyán (Bik., S. L. Bis.); tamaoyán (Neg., Tag.); tamaúan (Tag.); tamauyán (Ibn., Neg., Tag.); tamayuán (Tag., Bik.); tamayuón (Bik., Tag.).

4. WORCESTERIANTHUS Merrill

WORCESTERIANTHUS MAGALLANENSIS (Elm.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 270.

Flacourtia magallanensis Elm. Leaflet. Philip. Bot. 4 (1912) 1519.

Worcesterianthus casearioides Merr. in Philip. Journ. Sci. 9 (1914) Bot. 288.

Luzon (Cagayan, Tayabas, Laguna), Sibuyan, *Elmer 12079, 12323, 12142, F. B. 18436 Alvarez, 24257 Bernardo, 21629 Lopez, B. S. 19528, 20607, 16541, 14943, 33898 Ramos*. In forests at low and medium altitudes. A monotypic endemic genus.

Local names: Alipápat (Ibn.); sagípat (Ibn., Neg.).

5. ANACOLOSA Blume

ANACOLOSA LUZONIENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 253.

Luzon (Cagayan, Ifugao, Benguet, Nueva Vizcaya, Bataan, Cavite, Batangas, Laguna, *Merr. Phil. Pl. 1417* as *A. multiflora* Merr.), Mindoro, Masbate, Panay, Mindanao. In forests at low and medium altitudes, ascending to 1,200 m in Benguet. Endemic.

Local names: Aluloi (Tag.); gálo (Tag.); matoboto (S. L. Bis.); yu-pa (Gad.).

6. ERYTHROPALUM Blume

ERYTHROPALUM SCANDENS Blume Bijdr. (1826) 921; Miq. Fl. Ind. Bat. 1¹ (1856-57) 704; Mast. in Hook. f. Fl. Brit. Ind. 1 (1875) 578.

Erythropalum vagum Vidal Phan. Cuming. Philip. (1886) 85; Ceron Cat. Pl. Herb. Manila (1892) 45, non ? Mast.

Erythropalum grandifolium Elm. Leaf. Philip. Bot. 8 (1915) 2788.

Northern Luzon to Palawan and Mindanao. In forests at low and medium altitudes. Somewhat variable in the size and shape of its leaves, but all intermediate stages occur. India to Indo-China, Malay Peninsula, Sumatra, and Java.

Local names: Balingáyo (Tag.); barak-báarak (Mbo.); pulipis (Sub.); saynát (Tag.).

BALANOPHORACEAE

1. BALANOPHORA Forster

BALANOPHORA DECURRENS Fawcett in Trans. Linn. Soc. Bot. 2 (1886) 234, t. 33, f. 1-4; Elm. Leaf. Philip. Bot. 5 (1913) 1659.

Luzon, without definite locality, *Azaola* in Herb. Mus. Brit. Endemic.

BALANOPHORA FUNGOSA Forst. Char. Gen. (1776) 99, t. 50; Richard Elem. Bot. (1833) t. 15; Hook. f. in Trans. Linn. Soc. 22 (1859) 46, t. 8.

Luzon (Rizal, Bulacan), Palawan, *B. S.* 545 Foxworthy, 13067 Ramos, Yoder. In forests at medium altitudes. New Hebrides, Australia.

BALANOPHORA INCARNATA Elm. Leaf. Philip. Bot. 5 (1913) 1661.

Balanophora decurrens Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 51, non Fawc.

Luzon (Benguet, Pampanga, Bataan), Mindoro, Camiguin de Misamis, Mindanao, Merrill 4078, 4603, 3947, 5022, Elmer 13674, 10870, Whitford 1113, *B. S.* 15700 Fénix, 14613 Ramos, *F. B.* 3649 Curran, Copeland 1420, 1230, Clemens 1066. On roots of trees in forests at medium and higher altitudes, extending to 2,100 m. Endemic.

Local names: Kabokadkadtana (Bag.); magodaya (Mbo.).

BALANOPHORA MICRANTHA Warb. in Perk. Frag. Fl. Philip. (1905) 169; Elm. Leaf. Philip. Bot. 5 (1913) 1659.

Balanophora trimera Van Tiegh. in Ann. Sci. Nat. Bot. IX 6 (1907) 147; Fedde Repert. 7 (1909) 265.

Balanophora alutacea Hook. f. in Trans. Linn. Soc. 22 (1856) 47 (quoad Philip.); Elm. Leaf. Philip. Bot. 5 (1913) 1659, non Jungh.

Balanophora abbreviata Eichl. in DC. Prodr. 17 (1873) 148 (quoad Philip.); F.-Vill. Novis. App. (1880) 185, non Blume.

Balanophora fawcettii Elm. Leaf. Philip. Bot. 5 (1913) 1659.

Luzon (Tayabas, Laguna), Mindanao (Lanao), Loher 5161, Elmer 7613, Baker 1802, Gates 7753, Clemens 1145. In forests at medium altitudes, in Luzon growing on the roots of *Ficus nota* Merr. Endemic.

BALANOPHORA SUBGLOBOSA Elm. Leaf. Philip. Bot. 5 (1913) 1660.

Leyte, Elmer 7197. In hill forests, rare. Endemic.

DOUBTFUL SPECIES

CYNOMORIUM PHILIPPENSE Blanco Fl. Filip. (1837) 665, ed. 2 (1845) 464, ed. 3, 3 (1879) 72; Eichl. in DC. Prodr. 17 (1873) 123; Merr. Sp. Blancoanae (1918) 134.

The description apparently refers to a *Balanophora*, but its status is otherwise entirely indeterminable from the very imperfect description.

ARISTOLOCHACEAE

1. ARISTOLOCHIA Tournefort

ARISTOLOCHIA ELEGANS Mast. in Gard. Chron. (1885) 2: 301; Merr. Fl. Manila (1912) 186.

Luzon (Cagayan, Manila), *Merrill, F. B. 18597 Alvarez*. A native of tropical America, introduced in the Philippines and cultivated only.

ARISTOLOCHIA FOVEOLATA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 280.

Catanduanes, *B. S. 30370 Ramos*. In damp forests along small streams at low altitudes. Endemic.

ARISTOLOCHIA HUMILIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 9.

Luzon (Tayabas, east coast), *B. S. 19423 Ramos, 28838, 28480 Ramos & Edaño*. In damp forests along streams at low altitudes. Endemic.

Local name: Tangotong-gúbat (Tag.).

ARISTOLOCHIA LEYTENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 4.

Leyte, Samar, *B. S. 15201, 24558 Ramos, Wenzel 376*. In thickets and forests near streams at low altitudes. Endemic.

Local name: Maraburakán (S. L. Bis.).

ARISTOLOCHIA MACGREGORII Merr. in Philip. Journ. Sci. 5 (1910) Bot. 174.

Babuyan Islands (Dalupiri), *B. S. 10656 McGregor*. Endemic.

ARISTOLOCHIA MEMBRANACEA Merr. in Philip. Journ. Sci. 14 (1919) 381.

Luzon (Ilocos Norte), *B. S. 33338 Ramos*. On dry slopes, altitude about 350 m. Endemic.

ARISTOLOCHIA MINDANAENSIS Warb. in Perk Frag. Fl. Philip. (1905) 169.

Mindanao, *Warburg 14772, Williams 2692, Weber 1074*. In open forests at low altitudes; very closely allied to *Aristolochia tagala* Cham. Endemic.

ARISTOLOCHIA PHILIPPINENSIS Warb. in Perk. Frag. Fl. Philip. (1905) 170.

Luzon (Cagayan, Isabela, Ilocos Norte, Ifugao, Benguet, Pangasinan, Zambales, Rizal, Tayabas, Laguna, Sorsogon), Palawan, Bancalan, Negros. In thickets at low and medium altitudes, ascending to about 900 m in Benguet. Endemic.

Local name: Barubó (Neg.).

ARISTOLOCHIA SAMARENSIS Merr. in Philip. Journ. Sci. 11 (1916) Bot. 178.

Samar, *B. S. 24410* Ramos. In damp forests at low altitudes. Endemic.

ARISTOLOCHIA SERICEA Blanco Fl. Filip. (1837) 283, ed. 2 (1845) 198, ed. 3, 1 (1877) 350; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 72, Sp. Blancoanae (1918) 134.

Aristolochia imbricata Mast. in Journ. Linn. Soc. Bot. 14 (1875) 494.

Bragantia corymbosa F-Vill. Novis. App. (1880) 174, non Griff.

Luzon (Cagayan, Ilocos Norte, Union, Batangas), *Cuming 1247*, *Merrill Sp. Blancoanae 1049*, *B. S. 12962* *Fenix*, *22325* *Ramos*, *22725* *Castillo*. In dry thickets at low and medium altitudes. Endemic.

Local names: Baṅṅísi (Ilk.); paṅṅísi (Ilk.).

ARISTOLOCHIA TAGALA Cham. in Linnaea 7 (1832) 207, *t. 5, f. 3*; Klotz. in Monatsber. Akad. Wissensch. Berlin (1859) 597; Duch. in DC. Prodr. 15¹ (1864) 480; F.-Vill. Novis. App. (1880) 174; Vidal Phan. Cuming. Philip. (1885) 138, Rev. Pl. Vasc. Filip. (1886) 218; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 72, Fl. Manila (1912) 186, Sp. Blancoanae (1918) 135.

Aristolochia subsagittata Blanco Fl. Filip. (1837) 283, ed. 2 (1845) 197, ed. 3, 1 (1877) 350, *t. 104*.

Aristolochia indica Blanco op. cit. 282, 197, 349; F.-Vill. Novis. App. (1880) 174, non Linn.

Aristolochia roxburghiana Klotz. in Monatsber. Akad. Wissensch. Berlin (1859) 596; F.-Vill. Novis. App. (1880) 174.

Throughout the Philippines at low and medium altitudes, in thickets; the type was from Cavite Province, Luzon. India to Malaya.

Local names: Altán (Tag.); goan-goan (Bis.); kamkamaulau (Ig.); malaubi (Tag.); nagerús (Ilk.); parolparulan (Tag.); talatalárum (Tag.); taoin-táoin (Ilk.); timbāṅgan (Tag.); timbang-timbāṅgan (Tag.).

2. BRAGANTIA Loureiro

BRAGANTIA AFFINIS Planch. ex Rolfe in Kew Bull. (1913) 265.

Samar, Panay, *Cuming 1689*, *Merrill 6700*, *B. S. 31120* *Ramos & Edaño*. In damp forests along small streams at low and medium altitudes. Endemic.

BRAGANTIA BREVIPES Merr. in Philip. Journ. Sci. 17 (1920) 248.

Luzon (Tayabas), Alabat, Mindanao (Surigao), *B. S. 34811*, *34369* *Ramos & Pascasio*, *13370* *Ramos*, *Merrill 10490*. In damp forests along small streams at low altitudes. Endemic.

RAFFLESIACEAE

1. RAFFLESIA R. Brown

RAFFLESIA MANILLANA Teschem. in Boston Journ. Nat. Hist. 4 (1841) 63, *t. 6*; Ann. Mag. Nat. Hist. 9 (1842) 381; Solms in Ann. Jard. Bot. Buitenz. 9 (1891) 241, *t. 26, f. 7-10*, Engl. Pflanzenreich 5 (1901) 9; W. H. Brown in Philip. Journ. Sci. 7 (1912) Bot. 209, *t. 12-21*; Merr. Sp. Blancoanae (1918) 135; Koord. Bot. Overzicht Raffl. Nederl.-Ind. (1918) 75.

Rafflesia philippensis Blanco Fl. Filip. ed. 2 (1845) 565.

Rafflesia lagascae Blanco op. cit. 595, ed. 3, 3 (1879) 231.

Rafflesia cumingii R. Br. in Trans. Linn. Soc. 19 (1845) 243; Hook. f. in DC. Prodr. 17 (1873) 112; F.-Vill. Novis. App. (1880) 174; Miq. Fl. Ind. Bat. 1² (1858-59) 684.

Luzon (Kalinga, Laguna), Samar, Leyte, *B. S. 25353 Yates, Elmer 17895, Merrill Sp. Blancoanae 535*. Parasitic on roots of *Cissus* in forests at medium altitudes; very local. Endemic.

RAFFLESIA SCHADENBERGIANA Göppert ex Hieron. in Gartenflora 34 (1885) 3, t. 1177; Solms in Ann. Jard. Bot. Buitenz. 9 (1891) 239, t. 26, f. 1-6, 17, Engl. Pflanzenreich 5 (1901) 9; Koord. Bot. Overzicht Raffl. Nederl.-Ind. (1918) 81.

Mindanao (Davao), *Schadenberg & Koch*. On roots of *Cissus* in forests, altitude about 800 m. Endemic.

Local name: Bó-o (Bag.).

EXCLUDED SPECIES

RAFFLESIA PATMA Blume; F.-Vill. Novis. App. (1880) 174.

BRUGMANSIA ZIPPELLII Blume; F.-Vill. l. c.

POLYGONACEAE

1. RUMEX Linnaeus

RUMEX ACETOSELLA Linn. Sp. Pl. (1753) 538; F.-Vill. Novis. App. (1880) 173.

Luzon (Benguet). Introduced and thoroughly naturalized at Pauai, altitude about 2,400 m; it is very doubtful if F.-Villar saw actual Philippine specimens. A temperate country weed, native of Europe.

RUMEX CRISPUS Linn. Sp. Pl. (1753) 335.

Luzon (Benguet), *Merrill 4295, B. S. 32017 Santos, 3527 Mearns*. A native of Europe, now a widely distributed weed in temperate countries; in Benguet a recent introduction, but sparingly naturalized, altitude 1,400 to 2,200 m.

DOUBTFUL AND EXCLUDED SPECIES

RUMEX CHINENSIS Champ.; F.-Vill. Novis. App. (1880) 173.

RHEUM MURICATUM Blanco Fl. Filip. (1837) 327 = *Rumex muricatus* Blanco op. cit. ed. 2 (1845) 195, ed. 3, 1 (1877) 346; Merr. Sp. Blancoanae (1918) 136.

This was described by Blanco from cultivated specimens, and was reduced by F.-Villar, Novis. App. (1880) 173, to *Rumex maritimus* Linn. which is probably the correct disposition of it. The species, however, apparently no longer occurs in the Philippines, cultivated or otherwise.

2. POLYGONUM Tournefort

POLYGONUM APOENSE Elm. Leaf. Philip. Bot. 8 (1915) 2796.

Mindanao (Davao, Lanao), *Elmer 10754, F. B. 25230 Alvarez*. In open glens in dense forests, altitude 1,000 to 2,000 m; an ally of *Polygonum virginianum* Linn. Endemic.

Local name: Karikút (Bag.).

POLYGONUM BARBATUM Linn. Sp. Pl. (1753) 362; Meisn. in DC. Prodr. 14 (1857) 104 (var. *vulgare* Meisn.); F.-Vill. Novis. App. (1880) 172; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 217; Merr. Fl. Manila (1912) 187, Sp. Blancoanae (1918) 135.

Polygonum stoloniferum Blanco Fl. Filip. (1837) 314, ed. 2 (1845) 219, ed. 3, 2 (1878) 45.

Polygonum persicaria Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 407; F.-Vill. Novis. App. (1880) 172; Meisn. in DC. Prodr. 14 (1857) 117 quoad "Manila?", non Linn.

Northern Luzon to Mindanao, in open, usually wet places at low and medium altitudes, ascending to 1,400 m in some regions. India to Africa and Malaya.

Local names: Bukákau (Bik.); kanubsúban (Pamp.); kaykáyú (If.); saimbangan-tubig (Sul.); sigan-lúpa (Tag.); subsúban (Tag.).

POLYGONUM BENGUETENSE Merr. in Philip. Journ. Sci. 10 (1915) Bot. 301.

Luzon (Benguet), *Merrill 8008, 9682, Phil. Pl. 768, B. S. 13483 Ramos, 14120 Robinson*. In open wet places, altitude 1,200 to 1,500 m.

The alliance of this species is apparently with *Polygonum strigosum* R. Br. It is represented by *Faurie 751, 765* from Formosa and *Levine 20, 218, 1647* from Kwangtung Province, China.

POLYGONUM CHINENSE Linn. Sp. Pl. (1753) 363; Meisn. in DC. Prodr. 14 (1856) 131 (var. *ovalifolium* Meisn.); Miq. Fl. Ind. Bat. 1¹ (1859) 1008; F.-Vill. Novis. App. (1880) 172; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 217; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 272, 3 (1908) Bot. 405, 5 (1910) Bot. 346.

Batan Islands to Mindanao, in thickets and forests at medium and higher altitudes, 1,200 to 2,400 m. India to Japan southward to Malaya.

Local names: Bota-bota (Ig.); daynon (Ig.); kulangkúlang (Neg.); lang-gigit (If.); lutudan (Bon.); vonó (Iv.).

POLYGONUM CONVULVULUS Linn. Sp. Pl. (1753) 364; Meisn. in DC. Prodr. 14 (1857) 135; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 302.

Luzon (Benguet), *Merrill 9698*, a weed in gardens, altitude about 1,400 m. A widely distributed weed in temperate countries, a recently introduced plant in the Philippines.

POLYGONUM GLABRUM Willd. Sp. Pl. 2 (1799) 447; Meisn. in DC. Prodr. 14 (1857) 114; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 97.

Luzon (Benguet), *Elmer 5970, Merrill 7783, Loher 4595*, near rice paddies and in open swampy places, altitude 1,200 to 1,800 m. Tropical and subtropical parts of Asia, Africa, and America.

POLYGONUM HYDROPIPER Linn. Sp. Pl. (1753) 361; Meisn. in DC. Prodr. 14 (1857) 109; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 407; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 97.

Luzon (Benguet), *B. S. 31811 Santos, 14127 Robinson, Merrill 4428, Phil. Pl. 744, 1712, Williams 998 bis*. In open wet places, along streams, in old rice paddies, etc., altitude 1,200 to 2,000 m. Warmer parts of the world.

Local names: Agagat (Bon.); budíng (Ig.); tuba (Bon.).

POLYGONUM LANIGERUM R. Br. Prodr. (1810) 419; Meisn. in DC. Prodr. 14 (1857) 117 (var. *indica* Meisn.); F.-Vill. Novis. App. (1880) 172; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 217.

Luzon (Cagayan, Ilocos Norte, Ifugao), *Cuming 1377, B. S. 7902 Ramos, 2262 Mearns, Topping 875*. In open wet lands, near streams, etc., at low and medium altitudes. India to Africa, China, and Formosa, southward to Australia.

POLYGONUM MEARNsii Elm. Leaf. Philip. Bot. 1 (1908) 289.

Luzon (Benguet), *Elmer 8357, Williams 1355*. In thickets, damp forests, altitude about 2,200 m. An endemic species of which the fruits are unknown; it is apparently very closely allied to *Polygonum posumbu* Ham. but has very narrow leaves.

POLYGONUM MINUS Huds. Fl. Angl. (1762) 148; Meisn. in DC. Prodr. 14¹ (1856) 111; Gage ex King & Gamble in Journ. As. Soc. Beng. 75¹ (1912) 19.

Luzon (Bontoc, Benguet), *Merrill 9679, Phil. Pl. 745, Vanoverbergh 80, 2206, B. S. 6000 Ramos, 14121 Robinson*. In open wet places, altitude 1,200 to 1,500 m. Europe, temperate and tropical Asia southward to Australia; introduced in North America.

POLYGONUM ORIENTALE Linn. Sp. Pl. (1753) 343; Meisn. in DC. Prodr. 14 (1857) 123.

Luzon (Pampanga, Rizal), Mindanao (Lanao, Bukidnon), *B. S. 26100 Félix, Merrill Phil. Pl. 310, Parker 49*. In open wet places along streams at low and medium altitudes. India to Japan southward to Australia.

POLYGONUM PEDUNCULARE Wall. Cat. (1829) No. 1718, *nomen nudum*; Meisn. in DC. Prodr. 14 (1857) 133; Gage ex King & Gamble in Journ. As. Soc. Beng. 75¹ (1912) 23.

Polygonum strigosum F.-Vill. Novis. App. (1880) 172; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 217, non R. Br.

Luzon (Benguet, Laguna), Mindoro, Mindanao, *Cuming 484, Elmer 7729, 18313, McGregor 173, Clemens 196, B. S. 24997*. In open wet lands, swamps, etc., at low and medium altitudes, in Benguet ascending to 1,400 m. India to China southward to Australia.

POLYGONUM PERFOLIATUM Linn. Syst. ed. 10 (1759) 1005; Meisn. in DC. Prodr. 14 (1857) 132; Rolfe in Journ. Bot. 23 (1885) 215; Vidal Rev. Pl. Vasc. Filip. (1886) 217; Ceron Cat. Pl. Herb. Manila (1892) 138.

Luzon (Lepanto, Bontoc, Benguet), Mindanao (Bukidnon), *Elmer 5793, Merrill Phil. Pl. 747, B. S. 5897 Ramos, 39020 Ramos & Edaña*. Sprawling

over thickets in ravines, altitude 1,300 to 1,600 m. India to Japan southward to Malaya.

Local name: Kan̄gigit (Ig.).

POLYGONUM PLEBEIUM R. Br. Prodr. (1810) 420; F.-Vill. Novis. App. (1880) 172; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 217.

Polygonum roxburghii Meisn. var. *spathulatum* Meisn. in DC. Prodr. 14 (1857) 93.

Luzon (Cagayan, Isabela, Benguet), *Cuming 1289, B. S. 7811, 7866 Ramos, Elmer 5968, Merrill Phil. Pl. 825*. In open places along streams at low altitudes, ascending to 1,400 m in Benguet. Tropical and subtropical Asia, Africa, and Australia.

POLYGONUM POSUMBU Ham. in D. Don Prodr. Fl. Nepal. (1823) 71; Meisn. in DC. Prodr. 14 (1857) 105; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 98; Merr. op. cit. 5 (1910) Bot. 346.

Luzon (Benguet, Bontoc), Mindanao (Davao), *Merrill 6575, 4805, Phil. Pl. 7681, Williams 1450, Elmer 5776*. In open wet places, along trails, etc., altitude 1,400 to 1,800 m. India to Japan southward to Java.

Local names: Karosros (Bag.); tugtugilang (Bon.).

POLYGONUM PRAETERMISSUM Hook. f. Fl. Brit. Ind. 5 (1886) 47; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 98.

Luzon (Benguet), *Merrill 4521, 7749, 7705, Phil. Pl. 1713*. In open swamps, along small streams, etc., altitude 1,400 to 2,000 m. India to China; also in Tasmania.

POLYGONUM PUNCTATUM Ham. in D. Don Prodr. Fl. Nepal. (1825) 72; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 346.

Polygonum punctatum Ham. var. *alatum* Ham. in D. Don Prodr. Fl. Nepal. (1825) 72.

Polygonum alatum Ham. ex Spreng Syst. Veg. Cur. Post. (1827) 154; Hook. f. Fl. Brit. Ind. 5 (1886) 39; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 97.

Polygonum nepalense Meisn. Monogr. (1826) 128; DC. Prodr. 14 (1857) 128.

Luzon (Bontoc, Benguet), *Merrill 9681, Phil. Pl. 717, Williams 1147, Elmer 6603, Lohr 5207*. In open damp places, on hills, etc., altitude 1,300 to 1,800 m. Southern Asia to Japan, southward to Java and New Guinea.

POLYGONUM ROETTLERI Roth Nov. Pl. Sp. (1821) 205.

Polygonum flaccidum Meisn. in DC. Prodr. 14¹ (1857) 107; Gage in Journ. As. Soc. Beng. 75¹ (1912) 21; F.-Vill. Novis. App. (1880) 172.

Luzon (Cagayan), *F. B. 11609 Curran*. In swampy places at low altitudes. India to China, Formosa, and Malaya.

POLYGONUM TOMENTOSUM Willd. Sp. Pl. 2 (1799) 447; Meisn. in DC. Prodr. 14 (1857) 124; F.-Vill. Novis. App. (1880) 172; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 218; Merr. Fl. Manila (1912) 187, Sp. Blancoanae (1918) 136.

Polygonum bellardi Blanco Fl. Filip. (1837) 314, ed. 2 (1845) 219, ed. 3, 2 (1878) 45, non All.

Polygonum orientale F.-Vill. Novis. App. (1880) 172, non Linn.

Northern Luzon to Palawan and Mindanao, in shallow-water swamps, etc., at low and medium altitudes. India to Africa, southern China, and Malaya.

Local names: Kabakbák (Mag.); mandianag (Sub.); subsúban (Tag.).

3. CORCULUM Stuntz

(*Antigonon* Endlicher)

CORCULUM LEPTOPUS (Hook. & Arn.) Stuntz in U. S. Dept. Agr. Bur. Pl. Ind. Bull. 282 (1913) 86.

Antigonon leptopus Hook. & Arn. Bot. Beechy's Voy. (1841) 308, t. 69; Meisn. in DC. Prodr. 14 (1857) 184; Ceron Cat. Pl. Herb. Manila (1892) 138; Merr. Fl. Manila (1912) 188.

Antigonon cordatum F.-Vill. Novis. App. (1880) 171; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 462, non Mart. & Gal.

A native of tropical America, probably introduced into the Philippines about 1870, now in common cultivation throughout the Archipelago for ornamental purposes. Widely known as *cadena de amor* (Sp.).

Stuntz in proposing the new generic term *Corculum* notes that *Antigonon* is not technically published by Endlicher, and is, moreover, antedated by *Antigonon* Velloso.

4. MUEHLENBECKIA Meisner

MUEHLENBECKIA PLATYCLADA Meisn. in Bot. Zeit. 22 (1865) 313; F.-Vill. Novis. App. (1882) 354; Vidal Rev. Pl. Vasc. Filip. (1886) 218; Merr. Fl. Manila (1912) 188.

Exocarpus ceramicus Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 317, non DC.

A native of Polynesia, probably introduced into the Philippines about 1870, now widely cultivated in gardens.

Local name: Alupíhan (Tag.).

CHENOPODIACEAE

1. CHENOPODIUM Linnaeus

CHENOPODIUM ACUMINATUM Willd. in Ges. Nat. Fr. Neue Schr. 2 (1799) 124, t. 5, f. 2; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 405.

Batan Islands, *B. S. 3807 Fénix*. In waste places. An introduced weed; of wide distribution in temperate and subtemperate regions.

CHENOPODIUM AMBROSIOIDES Linn. Sp. Pl. (1753) 219; Miq. Fl. Ind. Bat. 1¹ (1857) 1017; F.-Vill. Novis. App. (1880) 171; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 25; Philip. Journ. Sci. 5 (1910) Bot. 346; Fl. Manila (1912) 189, Sp. Blancoanae (1918) 136.

Throughout the Philippines in the settled areas, cultivated and spontaneous; at medium and higher altitudes (Benguet) often very abundant. A native of Mexico, now of pantropic distribution.

Local names: Adlabón (Ig.); alpasóte, alpasótis, aposótis, pasótis (Tag., Bis., Ilk., all corruptions of the Mexican *apazotl*); bulbúla (Bon.); libug (If.).

CHENOPODIUM POLYSPERMUM Linn. Sp. Pl. (1753) 220; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 145.

Luzon (Benguet), *Guerrero*. In waste places, altitude about 1,300 m. A casual weed, introduced; widely distributed in temperate and subtemperate regions.

EXCLUDED SPECIES

CHENOPODIUM ALBUM Linn.; F.-Vill. Novis. App. (1880) 171.

I have seen no Philippine material representing this widely distributed weed. Two other representatives of the family are reported from the Philippines, the common beet (*Sp. remolacha*), *Beta vulgaris* Linn., and *Spinacia oleracea* Mill. The beet is fairly common in cultivation but its occurrence is dependent on annually imported seeds; I have seen no spinach in the Philippines.

AMARANTHACEAE

1. DEERINGIA R. Brown

DEERINGIA AMARANTHOIDES (Lam.) Merr. Interpret. Herb. Amb. (1917). 211, Sp. Blancoanae (1918) 136.

Achyranthes amaranthoides Lam. Encycl. 1 (1785) 548.

Celosia baccata Retz. Obs. 5 (1789) 23; Blanco Fl. Filip. (1837) 193.

Deeringia celosioides R. Br. Prodr. (1810) 413; Blanco Fl. Filip. ed. 2 (1845) 135, ed. 3, 1 (1877) 244, t. 236; Miq. Fl. Ind. Bat. 1¹ (1858) 1025; Vidal Phan. Cuming. Philip. (1885) 136, Rev. Pl. Vasc. Filip. (1886) 215; F.-Vill. Novis. App. (1880) 167.

Deeringia baccata Moq. in DC. Prodr. 13² (1849) 236; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 51, Fl. Manila (1912) 190.

Deeringia indica Retz. ex Blume Bijdr. (1825) 542; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 407.

Luzon (Ilocos Norte to Batangas), Mindoro. Common in thickets at low and medium altitudes. India to China southward to Australia.

Local names: Aribugbúg (Ilk.); aribukbúk (Ilk.); ditiran (Tag.); hagarilis (Tag.); hanlilimókan (Bis.); sili-silihan (Tag.); suni-suni (Ilk.).

DEERINGIA POLYSPERMA (Roxb.) Moq. in DC. Prodr. 13² (1849) 236. *Celosia polysperma* Roxb. Fl. Ind. 2 (1824) 511.

Deeringia indica Zoll. ex Moq. in DC. Prodr. 13² (1849) 236; Miq. Fl. Ind. Bat. 1¹ (1858) 1026; F.-Vill. Novis. App. (1880) 167; Vidal Phan. Cuming. Philip. (1885) 136, Rev. Pl. Vasc. Filip. (1886) 215; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 51, 3 (1908) Bot. 405, non Retz.

Lestibudesia latifolia Blume Bijdr. (1825) 541.

Batan Islands to Mindanao and Palawan, common in thickets at low and medium altitudes, in Benguet ascending to 1,800 m. Malay Peninsula to the Moluccas.

Local names: Aditít (Iv.); babanat (Is.); bauaṅgán (Ig.); bayambáng (Tag.); bitoan (Mbo.); chaksil (Ig.); hagarilis (Tag.); paparangan (Mag.); sipsíp (Ig.); tagamtam (Bik.); talakták (Pamp.).

Var. **PUBESCENS** (Schinz) comb. nov.

Deeringia indica Zoll. var. *pubescens* Schinz in Bull. Herb. Boiss. II 3 (1903) 3.

Northern Luzon. Warburg 11703. Endemic.

EXCLUDED SPECIES

DEERINGIA ALTISSIMA F. Muell.; F.-Vill. Novis. App. (1880) 167.

2. CELOSIA Linnaeus

CELOSIA ARGENTEA Linn. Sp. Pl. (1753) 205; Blanco Fl. Filip. (1837) 192, ed. 2 (1845) 135, ed. 3, 1 (1877) 243; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 407; Miq. Fl. Ind. Bat. 1¹ (1858) 1028; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 216; F.-Vill. Novis. App. (1880) 167; Merr. Fl. Manila (1912) 190, Sp. Blancoanae (1918) 137.

Throughout the Philippines at low and medium altitudes in the settled areas; an introduced weed. Pantropic.

Local names: Kadayohan (Tag.); kindayohan (Tag.); kudiapa (Bis.); lofói (Ilk.); sansandók (Ilk.); taguhug (P. Bis.).

CELOSIA CRISTATA Linn. Sp. Pl. (1753) 205; Blanco Fl. Filip. (1837) 191; Miq. Fl. Ind. Bat. 1¹ (1858) 1027; F.-Vill. Novis. App. (1880) 167; Merr. Sp. Blancoanae (1918) 137.

Celosia coccinea Linn. Sp. Pl. ed. 2 (1762) 297; Blanco Fl. Filip. ed. 2 (1845) 134, ed. 3 1 (1877) 241, t. 64.

In fairly common cultivation for ornamental purposes, rarely spontaneous or subspontaneous; the cockscomb, introduced. All warm countries.

Local names: Daling-manuk (Sul.); padong-padóngan (Bis.); palong-manók (Tag.); palong-paluñgan (Bik., Tag.); papaknoñgon-manók (Bik.); taptapiñgár (Ilk.).

DOUBTFUL AND EXCLUDED SPECIES

CELOSIA PHILIPPICA Steud. Nomencl. ed. 2, 1 (1841) 316; Moq. in DC. Prodr. 13² (1849) 241; Miq. Fl. Ind. Bat. 1¹ (1858) 1027; F.-Vill. Novis. App. (1880) 168.

Lestibudesia philippica Weinm. in Syll. Ratisb. 1 (1828) 118.

"In ins. Lucon prope Manillam" Moquin. I do not recognize the species, which may not have been from the Philippines.

CELOSIA CERNUA Juss.; F.-Vill. Novis. App. (1880) 168.

CELOSIA PHYTOLOCCAEFOLIA Juss.; F.-Vill. l. c.

CELOSIA BICOLOR Blanco Fl. Filip. (1837) 191; Merr. Sp. Blancoanae (1918) 383.

Celosia glauca Blanco op. cit. ed. 2 (1845) 135, ed. 3, 1 (1877) 242, non Rottl.

Fernandez-Villar referred this to *Celosia philippica* Steud., but Blanco's description presents nothing in common with that of the latter species. The form described by Blanco was certainly no amaranthaceous plant, and may possibly have been a species of *Ammannia* of the Lythraceae; I cannot determine its status from the imperfect description.

3. ALLMANIA R. Brown

ALLMANIA ALBIDA R. Br. in Wall. Cat. (1832) No. 6981, *nomen nudum*; F.-Vill. Novis. App. (1880) 168, Rev. Pl. Vasc. Filip. (1886) 216, Phan. Cuming. Philip. (1885) 137.

Chamissoa albida Moq. in DC. Prodr. 13² (1849) 248, non Mart.

Mindoro, *Cuming 1567, Merrill 3358*. In sandy soil along the seashore. India and Ceylon to Java.

4. AMARANTHUS Linnaeus

AMARANTHUS PANICULATUS Linn. Sp. Pl. ed. 2 (1763) 1406; Moq. in DC. Prodr. 13² (1849) 257; F.-Vill. Novis. App. (1880) 168; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 430; Usteri Beitr. Ken. Philip. Veg. (1905) 124.

Amaranthus caudatus Merr. Fl. Manila (1912) 193, non Linn.

Northern Luzon to Mindanao, in open waste places at low and medium altitudes, sometimes cultivated; certainly introduced. Tropical Asia, Africa, and Malaya.

Local names: Halon (Tag.); kadiapa (Bik.); kalúnai (Ilk.); koyapa (C. Bis.); kudiapa (Bis.); kuliapa (P. Bis.); urai (Tag.).

AMARANTHUS SPINOSUS Linn. Sp. Pl. (1753) 991; Blanco Fl. Filip. (1837) 710, ed. 2 (1845) 491, ed. 3, 3 (1879) 113; Moq. in DC. Prodr. 13² (1849) 260; Miq. Fl. Ind. Bat. 1¹ (1858) 1031; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 405; F.-Vill. Novis. App. (1880) 168; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 216; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 71, Philip. Journ. Sci. 5 (1910) Bot. 346, Fl. Manila (1912) 192, Sp. Blancoanae (1918) 137.

Throughout the Philippines, a weed in open waste places, gregarious and abundant along sand bars and margins of streams; probably introduced in the Philippines. Pantropic.

Local names: Akum (Mag.); alayon (If.); ayantoto (Pamp.); báocan (Bon.); bayambáng (Tag.); gitin-giting (Sul.); harum (Bis.); kalitis (Bis.); kalúnai (Ilk.); kilitis (Tag., Bik.); kuantón (Ilk.); kuantúng (Ilk.); kulitis (P. Bis.); oort (Tag.); orái (Tag.); tadtád (Bon.); tai-kuda (Sul.); tilitis (Bis.); urái (Tag.); uri (Tag.).

AMARANTHUS TRICOLOR Linn. Sp. Pl. (1753) 989; Merr. Interpret. Herb. Amb. (1918) 213.

Amaranthus gangeticus Linn. Syst. ed. 10 (1759) 1268; Moq. in DC. Prodr. 13² (1849) 261; F.-Vill. Novis. App. (1880) 168; Merr. Fl. Manila (1912) 193, Sp. Blancoanae (1918) 137.

Amaranthus cruentus Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 289, non Linn.

Amaranthus mangostanus Blanco Fl. Filip. (1837) 711, ed. 2 (1845) 492, ed. 3, 3 (1879) 114, non Linn.

Amaranthus melancholicus F.-Vill. Novis. App. (1880) 168, non ? Linn.

Northern Luzon to Mindanao; an occasional weed in waste places, more commonly cultivated, both typical *tricolor*, the upper leaves bright red, and a form with uniformly brownish purple leaves. Introduced. Pantropic.

Local names: Halon (Tag.); kolites (Tag.).

AMARANTHUS VIRIDIS Linn. Sp. Pl. ed. 2 (1763) 1405; F.-Vill. Novis. App. (1880) 169; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 405, Fl. Manila (1912) 193.

Euxolus caudatus Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 262, non Moq.

Euxolus viridis Moq. in DC. Prodr. 13¹ (1849) 273.

Throughout the Philippines at low and medium altitudes; a common weed, probably introduced. All warm countries.

Local names: Báuan (Bon.); halom (Tag., Bis.); halunapa (Sul.); ka-diapa (Mbo.); kalúnai (Ilk.); kilítis (Bik.); kolites (Tag.); kulitis (Tag.); nási (It.); siitán (Ilk.); sitán (Ib.).

DOUBTFUL AND EXCLUDED SPECIES

AMARANTHUS BLITUM Linn.; F.-Vill. Novis. App. (1880) 168.

AMARANTHUS LIVIDUS Linn.; F.-Vill. l. c.

AMARANTHUS MANGOSTANUS Linn. F.-Vill. l. c.

AMARANTHUS OLERACEUS Linn.; F.-Vill. l. c.

AMARANTHUS TRISTIS Linn.; F.-Vill. l. c.

AMARANTHUS SALICIFOLIUS Hort. in Gard. Chron. (1871) 1550, f. 331.

"It was, we are informed, introduced from the Philippines." I do not recognize the species, which was, in all probability, not of Philippine origin. The figure is of a leafy branch only.

5. CYATHULA Loureiro

CYATHULA LANCIFOLIA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 179.

Luzon (Sorsogon), Samar, *Elmer 15753*, *B. S. 24514*, *24553 Ramos*. In damp forests at low altitudes. Endemic.

Local name: Rukot-dúkot (S. L. Bis.).

CYATHULA PROSTRATA (Linn.) Blume Bijdr. (1825) 549; Moq. in DC. Prodr. 13² (1849) 326; F.-Vill. Novis. App. (1880) 169; Vidal Phan. Cuming. Philip. (1885) 137; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 51, Manila (1912) 194.

Achyranthes prostrata Linn. Sp. Pl. ed. 2 (1762) 296.

Cyathula geniculata Lour. Fl. Cochinch. (1790) 102; Miq. Fl. Ind. Bat. 1¹ (1858) 1045; Vidal Rev. Pl. Vasc. Filip. (1886) 216.

Throughout the Philippines at low and medium altitudes, in waste places, thickets, etc. Pantropic.

Local names: Bakháka (Ilk.); dayáng (Tag.); dokat-dókat (Bis.); sait-sait (Sul.); tuhod-manók (Tag.).

6. PUPALIA Jussieu

PUPALIA LAPPACEA (Linn.) Juss. in Ann. Mus. Paris 2 (1803) 132; Moq. in DC. Prodr. 13² (1849) 331; Miq. Fl. Ind. Bat. 1¹ (1858) 1046; F.-Vill. Novis. App. (1880) 169; Merr. in Philip. Journ. Sci. 11 (1916) Bot. 269.

Achyranthes lappacea Linn. Sp. Pl. (1753) 204.

Achyranthes atropurpurea Lam. Encycl. 1 (1785) 546.

Desmochaeta flavescens DC. Cat. Hort. Monsp. (1813) 102; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 405.

Pupalia atropurpurea Moq. in DC. Prodr. 13² (1849) 331; Miq. Fl. Ind. Bat. 1¹ (1858) 1046; F.-Vill. Novis. App. (1880) 169; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 216; Merr. Fl. Manila (1912) 193.

Luzon (Ilocos Norte, Ilocos Sur, Bontoc, Union, Pangasinan, Rizal, Laguna), Panay, Guimaras. In dry thickets at low and medium altitudes; not common. India to Madagascar, the Malay Peninsula, and Java.

Local names: Dokot-dókot (Bis.); igadígad (Ilk.); taguyupyúp (Ilk.).

7. AERUA Forskål

AERUA LANATA (Linn.) Juss. in Ann. Mus. Paris 11 (1808) 131; Miq. Fl. Ind. Bat. 1² (1858) 1039; Moq. in DC. Monog. Phan. 13² (1849) 303; F.-Vill. Novis. App. (1880) 169; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 216; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 52, Fl. Manila (1912) 194, Sp. Blancoanae (1918) 138.

Achyranthes lanata Linn. Sp. Pl. (1753) 204.

Illecebrum lanatum Linn. Mant. 2 (1771) 344; Blanco Fl. Filip. (1837) 190.

Celosia lanata Blanco Fl. Filip. ed. 2 (1845) 134, ed. 3, 1 (1877) 241, t. 354, non Linn.

Aerua brachiata Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 405, non Mart.

Luzon (Union to Batangas), Mindoro, Marinduque, Panay. Common in open dry waste places at low and medium altitudes, in regions subject to a prolonged dry season; probably introduced. India to tropical Africa and Malaya (Sumatra, Java).

Local names: Apugapúgan (Tag.); karlátan (Ilk.); pamaynap (Tag.); taba-áhas (Tag.).

AERUA SCANDENS (Roxb.) Wall. Cat. (1832) No. 6911; Moq. in DC. Prodr. 13² (1849) 302; F.-Vill. Novis. App. (1880) 169; Ceron Cat. Pl. Herb. Manila (1892) 137; Usteri Beitr. Ken. Philip. Veg. (1905) 124.

Achyranthes scandens Roxb. Fl. Ind. 2 (1824) 509.

Aerua velutina Moq. in DC. Prodr. 13² (1849) 301; F.-Vill. Novis. App. (1880) 169; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 216.

Desmotheca velutina Wall. Cat. (1832) No. 6935, *nomen nudum*.

Luzon (Cagayan, Batangas, Ilocos Norte), Guimaras, Mindoro, Palawan. In dry thickets at low and medium altitudes. India to China and Formosa, southward to Java.

Local name: Samsam (Tagb.).

EXCLUDED SPECIES

AERUA JAVANICA Juss.; F.-Vill. Novis. App. (1880) 169.

AERUA SANGUIOLENTA Blume; F.-Vill. l. c.

AERUA TIMORENSIS Moq.; F.-Vill. l. c.

8. PSILOTRICHUM Blume

PSILOTRICHUM TRICHOTOMUM Blume Bijdr. (1825) 545; Moq. in DC. Prodr. 13² (1849) 280; F.-Vill. Novis. App. (1880) 169; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 216.

Luzon (Bontoc, Nueva Vizcaya, Laguna), Samar, Leyte, Mindanao, Cuming 658, B. S. 11485 McGregor, 24172 Ramos, 37379 Ramos & Edaña,

Merrill 7302. In open wet places at low and medium altitudes; rare. India to the Malay Peninsula, Sumatra, Java, and Borneo.

Local name: Katiangkas (Sub.).

9. *ACHYRANTHES* Linnaeus

ACHYRANTHES ASPERA Linn. Sp. Pl. (1753) 204; Moq. in DC. Prodr. 13² (1849) 314; Blanco Fl. Filip. (1837) 188, ed. 2 (1845) 133, ed. 3, 1 (1877) 239; Miq. Fl. Ind. Bat. 1¹ (1858) 1042; F.-Vill. Novis. App. (1880) 170; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 217; Merr. Fl. Manila (1912) 195, Sp. Blancoanae (1918) 138.

Desmochaeta repens Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 105, non R. & S.

Throughout the Philippines at low and medium altitudes, a weed in open waste places; a pantropic weed, probably introduced in the Philippines.

Local names: Angud (Pamp.); deket-déket (Ilk.); dokot-dókot (Tag.); garém (Ilk.); guéla (Neg.); hañgód (Tag.); hañgór (Tag.); hañgót (Tag.); higad-higad (Ilk.); libai (Tag.); lopo-lópo (Bis.); niknikítan (Bon.); ragragádi (Ilk.); saramo (Bis.).

ACHYRANTHES BIDENTATA Blume Bijdr. (1825) 545; Moq. in DC. Prodr. 13² (1849) 312.

Mindanao (Bukidnon, Lanao), *Clemens, B. S. 38877 Ramos & Edaño*. In old clearings, altitude 600 to 1,000 m. India to Japan southward to Java. This is probably better treated merely as a variety of *Achyranthes aspera* Linn. as O. Kuntze has done, Rev. Gen. Pl. (1891) 535.

Local name: Masiya (Buk.).

EXCLUDED SPECIES

ACHYRANTHES AQUATICA R. Br.; F.-Vill. Novis. App. (1880) 170.

ACHYRANTHES FRUTICOSA Lam.; F.-Vill. l. c.

ACHYRANTHES GRANDIFOLIA Moq.; F.-Vill. l. c.

ACHYRANTHES JAVANICA Moq.; F.-Vill. l. c.

10. *ALTERNANTHERA* Forskål

ALTERNANTHERA FICOIDES (Linn.) R. Br. ex Roem. & Schultes Syst. 5 (1819) 555; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 404.

Gomphrena ficoidea Linn. Sp. Pl. (1753) 225.

Gomphrena polygonoides Linn. l. c.

Teleianthera manillensis Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 404.

Telanthera ficoides Moq. in DC. Prodr. 13² (1849) 363; F.-Vill. Novis. App. (1880) 170.

Telanthera polygonoides Moq. l. c.

Telanthera frutescens Moq. var. *manillensis* Moq. in DC. Prodr. 13² (1849) 366.

Alternanthera frutescens Merr. Fl. Manila (1912) 192, non ? R. Br.

Common in low lands about Manila, especially within the influence of brackish water; also in Negros, *Merrill 8, 3418, Phil. Pl. 1508*. Introduced from tropical America.

Local name: Lupug-lupug (P. Bis.).

- ALTERNANTHERA SESSILIS** (Linn.) R. Br. ex R. & S. Syst. 5 (1819) 554; Miq. Fl. Ind. Bat. 1¹ (1858) 1048; Moq. in DC. Prodr. 13² (1849) 357; F.-Vill. Novis. App. (1880) 170; Merr. Fl. Manila (1912) 191, Sp. Blancoanae (1918) 138.
Gomphrena sessilis Linn. Sp. Pl. (1753) 225.
Illecebrum sessile Linn. Sp. Pl. ed. 2 (1762) 300.
Achyranthes villosa Blanco Fl. Filip. (1837) 189, ed. 2 (1845) 134, ed. 3, 1 (1877) 240, non Forsk.
Illecebrum triandrum Llanos Frag. Pl. Filip. (1851) 61; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 43, non Ham.
Alternanthera denticulata F.-Vill. Novis. App. (1880) 170; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 217, non R. Br.

Throughout the Philippines in the settled areas at low and medium altitudes; a common weed in open usually wet places. Pantropic.

Local names: Bilanamanut (Mag.); boñga-bóngga (Tag.); gogoát (Bon.); sákit (Bon.); tagtágu (Bon.).

- ALTERNANTHERA VERSICOLOR** Hort. ex Regel in Gartenfl. (1869) 101; Merr. Fl. Manila (1912) 192.

Telanthera versicolor Regel Ind.-Sem. Hort. Petrop. (1868) 83.

Commonly cultivated as a border plant in gardens on account of its colored leaves, where native uncertain. Pantropic in cultivation. In the Philippines it is sometimes known as *San Diego*.

11. GOMPHRENA Linnaeus

- GOMPHRENA GLOBOSA** Linn. Sp. Pl. (1753) 224; Blanco Fl. Filip. (1837) 198, ed. 2 (1845) 139, ed. 3, 1 (1877) 251, *t.* 63; Miq. Fl. Ind. Bat. 1¹ (1858) 1050; F.-Vill. Novis. App. (1880) 170; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 22, 27 (1905) 71, Fl. Manila (1912) 191, Sp. Blancoanae (1918) 138.

Throughout the settled areas of the Philippines in cultivation, often occurring as an escape; introduced. All warm countries.

Local names: Bokíngan (Tag.); botbotónes (Ilk.); botoncillo (Sp.); botones-botonésan (Tag.); bukiñgan (Tag.); bulah (Bag.); butiñgan (S. L. Bis.).

12. IRESINE P. Browne

- IRESINE HERBSTII** Hook. in Gard. Chron. (1864) 654, 1206.

Luzon (Bontoc, Laguna, Manila), Leyte, occasional in cultivation. A native of Brazil, a recently introduced plant in the Philippines.

EXCLUDED GENERA

- DIGERA ARVENSIS** Forsk.; F.-Vill. Novis. App. (1880) 168.
NOTHOSAERUA BRACHIATA Wight; F.-Vill. op. cit. 169.

NYCTAGINACEAE

1. MIRABILIS Linnaeus

- MIRABILIS JALAPA** Linn. Sp. Pl. (1753) 177; Choisy in DC. 13² (1849) 428; F.-Vill. Novis. App. (1880) 166; Miq. Fl. Ind. Bat. 1¹ (1858) 988; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 70, Fl. Manila (1912) 197, Sp. Blancoanae (1918) 139.

Mirabilis longiflora Blanco Fl. Filip. (1837) 77, ed. 2 (1845) 57, ed. 3, 1 (1877) 109, non Linn.

Throughout the Philippines in the settled areas in cultivation and frequently spontaneous in the vicinity of towns. Introduced from Mexico by the Spaniards at an early date, now pantropic.

Local names: A las cuatro, maravilla (Sp.); gilála (Tag.); oración (Sp.); suspiros (Sp.); tallang (Sul.).

2. BOERHAAVIA Linnaeus

BOERHAAVIA DIFFUSA Linn. Sp. Pl. (1753) 3; Choisy in DC. Prodr. 13² (1849) 452; Blanco Fl. Filip. (1837) 8, ed. 2 (1845) 6, ed. 3, 1 (1877) 11, *t.* 93; F.-Vill. Novis. App. (1880) 166; Merr. Fl. Manila (1912) 197, Sp. Blancoanae (1918) 139.

Boerhaavia repens Linn. Sp. Pl. (1753) 3; Usteri Beitr. Ken. Philip. Veg. (1905) 134.

Throughout the Philippines in open places in the settled areas at low and medium altitudes; a common weed in and about towns. Pantropic.

Local names: Katkátud (Ilk.); paanbalíbis (Tag.); tabtabókol (Ilk.).

EXCLUDED SPECIES

BOERHAAVIA REPANDA Willd.; F.-Vill. Novis. App. (1880) 167.

3. BOUGAINVILLEA Commerson

BOUGAINVILLEA SPECTABILIS Willd. Sp. Pl. 2 (1799) 348 (*Bugin-villaea*); F.-Vill. Novis. App. (1880) 167; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 32, Fl. Manila (1912) 196.

A native of tropical America, now widely cultivated for ornamental purposes in the larger towns of the Philippines.

4. PISONIA Plumier

PISONIA ACULEATA Linn. Sp. Pl. (1753) 1026; Blanco Fl. Filip. (1837) 195, ed. 2 (1845) 137, ed. 3, 1 (1877) 247, *t.* 394; Choisy in DC. Prodr. 13² (1849) 440; F.-Vill. Novis. App. (1880) 167; Vidal Sinopsis Atlas (1883) 36, *t.* 76, *f.* A, Phan. Cuming. Philip. (1885) 136, Rev. Pl. Vasc. Filip. (1886) 215; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 70, Fl. Manila (1912) 196, Sp. Blancoanae (1918) 139.

Northern Luzon to Mindanao, in thickets and open forests at low and medium altitudes. Pantropic.

Local names: Digkit (Tag.); kabai (Mbo.); kolifafo (Ibn.); mankit (Tag.); marinoai (Mbo.); paang-tikling (Tag.); pakat-áso (Tag.); pana-kla (Tag.); puriket (Ilk.); puriket-ti-bákir (Ilk.).

PISONIA ALBA Spanoghe in Linnaea 15 (1841) 342; Miq. Fl. Ind. Bat. 1¹ (1858) 990; Merr. Fl. Manila (1912) 196, Interpret. Herb. Amb. (1917) 216, Sp. Blancoanae (1918) 140.

Cordia olitoria Blanco Fl. Filip. (1837) 123, ed. 2 (1845) 88, ed. 3, 1 (1877) 159, *t.* 44, non *Pisonia olitoria* Zoll.

Pisonia inermis Vidal Sinopsis (1883) 36, *t.* 76, *f.* C., non Forst. f.

In towns cultivated for ornamental purposes, not a native of the Philippines. It very seldom produces flowers in the Archipelago and is perhaps

not specifically distinct from the Malayan *Pisonia sylvestris* Teysm. & Binn. Tropical Asia and Malaya, in cultivation.

Local names: Koles-malúko (Tag.); malúko (Tag.).

PISONIA LONGIROSTRIS Teysm. & Binn. in Nat. Tijdschr. Nederl. Ind. 25 (1863) 401; Valetton in Ic. Bogor. 1 (1897) t. 21 sub nom. *P. cauliflora* cf. errata p. 149; C. B. Rob. in Bull. Torr. Bot. Club 35 (1908) 65.

Calpidia longirostris Heimerl. in Oester. Bot. Zeitschr. 63 (1913) 287.

Jolo, Williams 3125. A very characteristic species, otherwise known only from the Moluccas (Buru) and New Guinea.

PISONIA GRANDIS R. Br. Prodr. (1810) 422.

Pisonia inermis Forst. f. Prodr. (1786) 75; Choisy in DC. Prodr. 13² (1849) 441; Seem. in Journ. Bot. 1 (1863) 246; F.-Vill. Novis. App. (1880) 167, non Jacq.

Pisonia brunoniana Endl. Prodr. Fl. Norf. (1833) 43; Choisy in DC. Prodr. 13² (1849) 441.

Bancoran (Sulu Sea), Merrill 7156, the enormous trees forming a gregarious forest entirely covering the island to the exclusion of all other trees. Moluccas, northeastern Australia, and across Polynesia to the Palmyra Islands.

PISONIA UMBELLIFERA (Forst.) Seem. in Bonplandia 10 (1862) 154, Journ. Bot. 1 (1863) 244; F.-Vill. Novis. App. (1880) 167; Vidal. Sinopsis Atlas (1883) 36, t. 76, f. B; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 19.

Ceodes umbellifera Forst. Char. Gen. (1776) 71, t. 71.

Ceodes umbellata Forst. f. Prodr. (1786) 93.

Pisonia excelsa Blume Bijdr. (1825) 735; Choisy in DC. Prodr. 13³ (1849) 441; F.-Vill. Novis. App. (1880) 167; Vidal Phan. Cuming. Philip. (1885) 136, Rev. Pl. Vasc. Filip. (1886) 215; Merr. Sp. Blancoanae (1918) 139.

Buginvillea racemosa Blanco Fl. Filip. (1837) 307, ed. 2 (1845) 214, ed. 3, 2 (1878) 36.

Cedrota guianensis Blanco Fl. Filip. ed. 2 (1845) 213, ed. 3, 2 (1878) 33, non Raeusch.

Pisonia gammillii Merr. in Philip. Journ. Sci. 5 (1910) Bot. 175.

Calpidia excelsa Heimerl. in Oester. Bot. Zeitschr. 63 (1913) 287.

Pisonia villosa Vidal Cat. Pl. Prov. Manila (1880) 41, non Poir.

Northern Luzon to Palawan and Mindanao, in damp forests and in thickets at low and medium altitudes, locally abundant. Formosa, Java, and Malaya to Australia and Polynesia.

Local names: Anílin (Tagb.); anúling (Ting., Tagb., Tag., Bik., P. Bis.); anúring (P. Bis.); balagasáha (Tag.); budubud (C. Bis.); maklás (Ilk.); malagasáha (Bik.); malasá-a (Tag.); malaságing (C. Bis.); obod-óbod (Mbo.); patdang-labúyo (Tag.); tagkúling (C. Bis.); taken (C. Bis.); tampa (P. Bis.).

PHYTOLACCACEAE

1. RIVINIA Linnaeus

RIVINIA HUMILIS Linn. Sp. Pl. (1753) 121, var. **GLABRA** (Linn.) H. Walt. in Engl. Pflanzenreich 39 (1909) 105.

Rivinia laevis Linn. Mant. 1 (1767) 41; F.-Vill. Novis. App. (1880) 172; Ceron Cat. Pl. Herb. Manila (1892) 137.

Luzon, Merrill 8499, B. S. 19126 Graff. Occasional in waste places about Manila; a recent introduction which may not persist. Pantropic.

AIZOACEAE

1. MOLLUGO Linnaeus

MOLLUGO LOTOIDES (Linn.) C. B. Clarke in Hook. f. Fl. Brit. Ind. 2 (1879) 662, 776; Merr. Fl. Manila (1912) 199, Sp. Blancoanae (1918) 140.

Glinus lotoides Linn. Sp. Pl. (1753) 463; Blanco Fl. Filip. (1837) 413, ed. 2 (1845) 288, ed. 3, 2 (1878) 169.

Mollugo hirta Thunb. Prodr. Fl. Cap. (1794) 24; F.-Vill. Novis. App. (1880) 100; Vidal Phan. Cuming. Philip. (1885) 116, Rev. Pl. Vasc. Filip. (1886) 144.

Luzon (Ilocos Norte to Rizal), in open waste places about towns, rice paddies, etc., at low and medium altitudes. Pantropic.

Local names: Amargóso-bábi (Pamp.); lobio (Tag.); pápait-ti-nuáng (Ilk.).

MOLLUGO OPPOSITIFOLIA Linn. Sp. Pl. (1753) 89; DC. Prodr. 1 (1824) 391; Merr. Fl. Manila (1912) 199, Sp. Blancoanae (1918) 141.

Mollugo spargula Linn. Syst. ed 10 (1759) 881; DC. Prodr. 1 (1824) 391; Vidal Phan. Cuming. Philip. (1885) 116, Rev. Pl. Vasc. Filip. (1886) 144; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 405.

Mollugo subserrata Blanco Fl. Filip. (1837) 51, ed. 2 (1845) 34, ed. 3, 1 (1877) 63.

Polycarpaea frankenioides Presl Rel. Haenk. 2 (1830) 6; F.-Vill. Novis. App. (1880) 15, fide spec. in herb. Prag.!

Batan Islands to southern Luzon, Palawan. A common weed in and about towns at low and medium altitudes. India to tropical Africa and Australia.

Local names: Amargóso-bábi (Pamp.); malagóso (Tag.); margóso-damúlag (Pamp.); pápait (Ilk.); sarsalída (Tag.).

MOLLUGO PENTAPHYLLA Linn. Sp. Pl. (1753) 89; DC. Prodr. 1 (1824) 391; Merr. Sp. Blancoanae (1918) 141.

Mollugo stricta Linn. Sp. Pl. ed. 2 (1762) 131; Blanco Fl. Filip. (1837) 52, ed. 2 (1845) 35, ed. 3, 1 (1877) 64; F.-Vill. Novis. App. (1880) 100; Vidal Phan. Cuming. Philip. (1885) 116, Rev. Pl. Vasc. Filip. (1886) 144; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 52.

Mollugo sumatrana Gandoger in Bull. Soc. Bot. France 65 (1918) 29.

Throughout the Philippines as a weed in cultivated areas, in open grasslands, etc., at low and medium altitudes. India to Japan southward to Malaya.

Local names: Lepouo (Bon.); malagóso (Tag.); malugóso (Tag., Bis.); pisig-pisig (Bag.); salsalída (Bis.); sudlai (Sub.); sulangkang (Sub.).

2. SESUVIUM Linnaeus

SESUVIUM PORTULACASTRUM Linn. Syst. ed. 10 (1759) 1058, Amoen. Acad. 4 (1759) 136; Blanco Fl. Filip. (1837) 426, ed. 2 (1845) 297, ed. 3, 2 (1878) 187; F.-Vill. Novis. App. (1880) 99; Merr. in

- Govt. Lab. Publ. (Philip.) 27 (1905) 50, Fl. Manila (1912) 198, Sp. Blancoanae (1918) 141.
Portulaca portulacastrum Linn. Sp. Pl. (1753) 446.
Sesuvium indicum Linn. Ceron Cat. Pl. Herb. Manila (1892) 88, sphalm.
Sesuvium distylum Usteri Beitr. Ken. Philip. Veg. (1905) 118, non ?Ridl.

Along sandy seashores, throughout the Philippines. A pantropic strand plant.

Local names: Bilang-bílang (Bis.); dampálit (Tag., Pamp., Bis.); karampálit (Pamp.); tarumpálit (Tag.).

3. TRIANTHEMA Linnaeus

- TRIANTHEMA PORTULACASTRUM** Linn. Sp. Pl. (1753) 223; Merr. Fl. Manila (1912) 198, Sp. Blancoanae (1918) 141.
Trianthema monogyna Linn. Mant. 1 (1767) 69; F.-Vill. Novis. App. (1880) 100; Ceron Cat. Pl. Herb. Manila (1892) 88.
Portulaca toston Blanco Fl. Filip. (1837) 408.
Portulaca axilliflora Blanco op. cit. ed. 2 (1845) 285, ed. 3, 2 (1878) 163, t. 165, non Pers.

A weed of cultivation throughout the Philippines at low and medium altitudes, locally abundant in recently distributed soil. Pantropic.

Local names: Ayam (Bis.); toston (Tag.); ulisúman (P. Bis.).

PORTULACACEAE

1. PORTULACA Linnaeus

- PORTULACA OLERACEA** Linn. Sp. Pl. (1753) 445; Blanco Fl. Filip. (1837) 407, ed. 2 (1845) 284, ed. 3, 2 (1878) 162, t. 164; Miq. Fl. Ind. Bat. 1¹ (1858) 1061; F.-Vill. Novis. App. (1880) 15; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 406, Fl. Manila (1912) 200, Sp. Blancoanae (1918) 142.

A common weed throughout the Philippines in the settled areas; purslane. All warm countries.

Local names: Alusíman (Bik.); ausíman (Bik.); bakkakad (If.); dup-dupil (Bon.); golasíman (Tag.); gulasíman (Bik.); kantatába (Pang.); kolasíman (Tag.); luñgum (If.); makabling (Tag.); ñgalug (Ilk.); olasíman (Bik., Tag.); sahíkan (Bik., Tag.); ulisíman (Bik., Tag.).

- PORTULACA PILOSA** Linn. Sp. Pl. (1753) 445; F.-Vill. Novis. App. (1880) 15; Merr. Fl. Manila (1912) 199; Philip. Journ. Sci. 7 (1912) Bot. 234.

Luzon (Union, Pangasinan, Rizal, Cavite), in dry open places. Introduced from tropical America.

Local name: Romromkú (Ilk.).

- PORTULACA PACHYRRHIZA** Gagnep. in Bull. Soc. Bot. France 56 (1909) 41; Lecomte Fl. Gén. Indo-Chine 1 (1909) 275, t. 19, f. C.

Luzon (Ilocos Norte, Pangasinan), B. S. 27600 Ramos, F. B. 8408 Curran & Merritt. On sandy seashores. Indo-China.

- PORTULACA QUADRIFIDA** Linn. Mant. 1 (1767) 73; Miq. Fl. Ind. Bat. 1¹ (1858) 1061; F.-Vill. Novis. App. (1880) 15; Merr. in Philip.

Journ. Sci. 3 (1908) Bot. 406, Fl. Manila (1912) 200, Sp. Blancoanae (1918) 142.

Portulaca meridiana Blanco Fl. Filip. (1837) 408, ed. 2 (1845) 285, ed. 3, 2 (1878) 163, non Linn.

Batan Islands, Luzon (Cagayan to Rizal), a weed in and about towns, probably introduced. Tropical Asia and Africa to Malaya, Marianne, and Caroline Islands.

Local names: Maraṅgalog (Ilk., Ib.); sayikan (Tag.).

EXCLUDED SPECIES

PORTULACA TERETIFOLIA Linn.; F.-Vill. Novis. App. (1880) 15.

BASELLACEAE

1. BASELLA Linnaeus

BASELLA RUBRA Linn. Sp. Pl. (1753) 272; Blanco Fl. Filip. (1837) 215, ed. 2 (1845) 151, ed. 3, 1 (1877) 272, t. 74; Moq. in DC. Prodr. 13² (1849) 222; Miq. Fl. Ind. Bat. 1¹ (1858) 1023; F.-Vill. Novis. App. (1880) 171; Merr. Fl. Manila (1912) 200, Sp. Blancoanae (1918) 142.

Basella alba Linn. Sp. Pl. (1753) 272; Miq. Fl. Ind. Bat. 1¹ (1858) 1023; F.-Vill. Novis. App. (1880) 171; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 71.

Basella lucida Linn. Syst. ed. 10 (1759) 966; Blanco Fl. Filip. (1837) 216, ed. 2 (1845) 151, ed. 3, 1 (1877) 273; Miq. Fl. Ind. Bat. 1¹ (1858) 1024; F.-Vill. Novis. App. (1880) 171, Moq. in DC. Prodr. 13² (1849) 224.

Basella cordifolia Lam. Encycl. 1 (1783) 382; F.-Vill. Novis. App. (1880) 171.

Throughout the Philippines in the settled areas, in hedges, old cultivated areas, etc.; often planted. Certainly not a native of the Archipelago but of prehistoric introduction. Tropical Asia, Africa, and Malaya, often cultivated.

Local names: Alugbáti (Bis.); arogbáti (Bik.); dundula (Sul.); grána (Tag.); ilaibákir (Ilk.); libáto (Tag.).

2. ANREDERA Jussieu

ANREDERA SCANDENS (Linn.) Moq. in DC. Prodr. 13² (1849) 230; F.-Vill. Novis. App. (1880) 172; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 217; Merr. Fl. Manila (1912) 201, Sp. Blancoanae (1918) 142.

Anredera spicata Pers. Syn. 1 (1805) 297; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 24.

Gomphrena volubilis Blanco Fl. Filip. (1837) 199, ed. 2 (1845) 140, ed. 3, 1 (1877) 252.

Anredera cumingii Hassk. in Flora 48 (1865) 401.

Luzon (Laguna, Cavite, Rizal, Batangas), abundant in thickets at low and medium altitudes. Introduced from tropical America.

Local name: Olibato (Tag.).

EXCLUDED GENUS

BOUSSINGAULTIA BASSELLOIDES HBK.; F.-Vill. Novis. App. (1880) 172; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 24.

The second reference, and probably the first, was based on *Anredera scandens* Moq. erroneously identified.

CARYOPHYLLACEAE

1. STELLARIA Linnaeus

STELLARIA LAXA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 12.

Stellaria stellato-pilosa Hayata in Journ. Coll. Sci. Tokyo 25¹⁰ (1908) 58, t. 2.

Luzon (Benguet), *Loher 6612, Loher 1623, Merrill 4806, 4423, B. S. 32004 Santos, 4440, 4457 Mearns, F. B. 15975 Bacani*. On banks, cliffs, and in margins of thickets, altitude 1,600 to 2,300 m. I cannot distinguish the Formosan form from this (*Faurie 541, 1385*). The species is variable in size and in its pubescence, and is closely allied to the Indo-Chinese *Stellaria saxatilis* Ham. Formosa.

Local name: Budbúd (Ig.).

STELLARIA MEDIA (Linn.) Cyr. Char. Comm. (1784) 36; Edgw. & Hook. f. in Hook. f. Fl. Brit. Ind. 1 (1874) 230.

Alsine media Linn. Sp. Pl. (1753) 272.

Luzon (Benguet) *Merrill 9699, B. S. 31861 Santos*. In waste places, altitude 1,500 to 2,300 m. A universally distributed weed in the north temperate regions, a native of Asia; unquestionably a recently introduced plant in Benguet.

2. CERASTIUM Dillenius

CERASTIUM VULGATUM Linn. Sp. Pl. ed. 2 (1762) 627; Edgw. & Hook. f. in Fl. Brit. Ind. 1 (1874) 228.

Luzon (Benguet), *Merrill 4326*. A weed in gardens, altitude about 1,400 m. A universally distributed weed in the North Temperature Zone, extending southward to the mountains of India, introduced in many other regions, and a recently introduced plant in Benguet.

3. SAGINA Linnaeus

SAGINA PROCUMBENS Linn. Sp. Pl. (1753) 128; Edgw. in Hook. f. Fl. Brit. Ind. 1 (1874) 242; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 97, 5 (1910) Bot. 346.

Luzon (Benguet), *Loher 1622, Merrill 7713, B. S. 32020 Santos*. On wet cliffs, seepage slopes, etc., altitude 1,800 to 2,700 m. North and South Temperate Zones of both hemispheres.

Local name: sun̄gau (Ig.).

4. ARENARIA Linnaeus.

ARENARIA SERPYLLIFOLIA Linn. Sp. Pl. (1753) 423; DC. Prodr. 1 (1824) 411; Edgw. in Hook. f. Fl. Brit. Ind. 1 (1874) 239; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 97; Merr. op. cit. 5 (1910) Bot. 346.

Luzon (Benguet), *Loher 1621, Merrill 7712, B. S. 31860 Santos*. On wet cliffs, open seepage slopes, etc., altitude 1,300 to 2,400 m. Europe, northern Africa, temperate and subtemperate Asia, naturalized in other countries, apparently indigenous in Benguet.

5. SPERGULA Linnaeus

SPERGULA ARVENSIS Linn. Sp. Pl. (1753) 440; Edgw. & Hook. f. in Hook. f. Fl. Brit. Ind. 1 (1874) 243.

Luzon (Benguet), Merrill 4760, B. S. 4294, 4380, 31859 Santos. Recently introduced and thoroughly naturalized at Pauai, altitude about 2,400 m. A native of Europe, now a cosmopolitan weed in the North Temperate Zone, and also introduced into Australia.

6. DRYMARIA Willdenow

DRYMARIA CORDATA (Linn.) Willd. ex R. & S. Syst. 5 (1819) 406; DC. Prodr. 1 (1824) 395; Miq. Fl. Ind. Bat. 1^a (1858) 1053; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 122; Hook. f. Fl. Brit. Ind. 1 (1874) 244; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 77, 5 (1910) Bot. 346.

Holosteum cordatum Linn. Sp. Pl. (1753) 88.

Northern Luzon to Mindanao. In rice paddies, on open damp slopes, in damp thickets, abacá plantations, etc., locally abundant. Pantropic; probably a native of tropical America.

Local name: Bakalaŋga (Buk.).

7. POLYCARPON Loeffling

POLYCARPON INDICUM (Retz.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 302, Sp. Blancoanae (1918) 143.

Loeflingia indica Retz. Obs. 4 (1786) 38.

Pharnaceum depressum Linn. Mant. 2 (1771) 564, non *Polycarpon depressum* Nutt.

Polycarpaea depressa DC. Prodr. 3 (1828) 357.

Polycarpon loeflingiae Benth. & Hook. f. ex. Edgw. in Hook. f. Fl. Brit. Ind. 1 (1874) 245; F.-Vill. Novis. App. (1880) 15; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 19.

Polycarpon polyphyllum Blanco Fl. Filip. (1837) 53, ed. 2 (1845) 36, ed. 3, 1 (1877) 66.

Luzon (Pampanga), Merrill 1462. Apparently very rare and local in the Philippines. Tropical Asia and Africa.

8. POLYCARPAEA Lamarck

POLYCARPAEA CORYMBOSA (Linn.) Lam. Tabl. Encycl. 2 (1797) 129; Hook. f. Fl. Brit. Ind. 1 (1874) 245; F.-Vill. Novis. App. (1880) 15; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 347.

Achyranthes corymbosa Linn. Sp. Pl. (1753) 205.

Luzon (Ilocos Norte, Lepanto, Bontoc, Benguet, Zambales). In open, dry, sandy places, dry slopes, etc., from near sea level to an altitude of 1,300 m; locally abundant. Pantropic.

EXCLUDED GENUS

DIANTHUS CHINENSIS Linn. Sp. Pl. (1753) 411; F.-Vill. Novis. App. (1880) 14; Naves in Blanco Fl. Filip. (1877-83) t. 94.

This species is occasionally cultivated in gardens and is locally known as *clavel* (Sp.).

NYMPHAEACEAE

1. NELUMBIUM Jussieu

NELUMBIUM NELUMBO (Linn.) Druce Bot. Exch. Club (1914) 421; Merr. Interpret. Herb. Amb. (1917) 218, Sp. Blancoanae (1918) 143. *Nymphaea nelumbo* Linn. Sp. Pl. (1753) 511.

Nelumbium speciosum Willd. Sp. Pl. 2 (1799) 1258; Blanco Fl. Filip. ed. 2 (1845) 318, ed. 3, 2 (1878) 223, *t.* 158; DC. Prodr. 1 (1824) 113; Miq. Fl. Ind. Bat. 1² (1858) 91; F.-Vill. Novis. App. (1880) 9; Vidal Phan. Cuming. Philip. (1885) 93, Rev. Pl. Vasc. Filip. (1886) 46.

Nelumbium turbinatum Blanco Fl. Filip. (1837) 458.

Nelumbium transversum Presl Rel. Haenk. 2 (1835) 83.

Northern Luzon to Mindanao, in shallow lakes, locally very abundant, as in parts of Lake Bay; probably an introduced plant in the Philippines, but if so of prehistoric introduction; a native of Asia, now widely distributed in cultivation. The lotus.

Local names: Baíno (Tag.); liñgáling (Ibn.); saua (Mag.); súkau (Ilk.).

2. NYMPHAEA Tournefort

NYMPHAEA NOUCHALI Burm. f. Fl. Ind. (1768) 120; Merr. in Philip. Journ. Sci. 19 (1921) 350.

Nymphaea pubescens Willd. Sp. Pl. 2 (1799) 1154; DC. Prodr. 1 (1824) 15; Conard in Carnegie Inst. Publ. 4 (1905) 198, *t.* 17; Merr. Interpret. Herb. Amb. (1917) 219, Sp. Blancoanae (1918) 143.

Nymphaea lotus Blanco Fl. Filip. (1837) 456, ed. 2 (1845) 317, ed. 3, 2 (1878) 222; Miq. Fl. Ind. Bat. 1² (1858) 89; F.-Vill. Novis. App. (1880) 9; Vidal Phan. Cuming. Philip. (1885) 93, Rev. Pl. Vasc. Filip. (1886) 46; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 17, Philip. Journ. Sci. 2 (1907) Bot. 430, non Linn.

Castalia pubescens Blume Bijdr. (1825) 48; Merr. Fl. Manila (1912) 202.

Northern Luzon to Mindanao, in shallow lakes, locally very abundant. Tropical Asia to Malaya.

Local names: Lábas (Tag.); laúas (Tag.); pulau (Tag.); talailo (Bis.); tunas (Bis.).

NYMPHAEA STELLATA Willd. Sp. Pl. 2 (1799) 1153; DC. Prodr. 1 (1824) 115; Miq. Fl. Ind. Bat. 1² (1858) 90; F.-Vill. Novis. App. (1880) 9; Vidal Phan. Cuming. Philip. (1885) 93, Rev. Pl. Vasc. Filip. (1886) 46; Conard in Carnegie Inst. Publ. 4 (1905) 140.

Castalia stellata Blume Bijdr. (1825) 49; Merr. Fl. Manila (1912) 201.

Luzon (Lake Bay), Merrill 5013, Baker 650, Quisumbing. In shallow water along the margins of the lake; much less common than the preceding species. Tropical Asia, Africa, and Malaya.

CERATOPHYLLACEAE

1. CERATOPHYLLUM Linnaeus

CERATOPHYLLUM DEMERSUM Linn. Sp. Pl. (1753) 992; Hook. f. Fl. Brit. Ind. 5 (1888) 639; Merr. Fl. Manila (1912) 202, Sp. Blancoanae (1918) 144.

Ceratophyllum submersum Llanos Frag. Pl. Filip. (1851) 105; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 81; F.-Vill. Novis. App. (1880) 210, non ? Linn.

Northern Luzon to Palawan and Mindanao, in shallow lakes and slow streams. All warm countries.

Local names: Arigmán (Tag.); ináta (Tag.); linámun (Mag.).

RANUNCULACEAE

1. ANEMONE Linnaeus

ANEMONE VITIFOLIA Ham. in DC. Syst. 1 (1818) 211; Hook. f. & Th. in Hook. f. Fl. Brit. Ind. 1 (1872) 8; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 99; Merr. op. cit. 5 (1910) Bot. 348.

Anemone luzoniensis Rolfe ex Hayata in Bot. Mag. Tokyo 20 (1906) 73, *nomen nudum*.

Luzon (Ifugao, Lepanto, Bontoc, Benguet). On slopes, in ravines, etc., 1,400 to 2,400 m altitude. Himalayan region to southern China and Formosa.

Local names: Baloi (Bon.); banata (Bon.); kabkabu (Ig.); omek (Bon.).

2. CLEMATIS Dillenius

CLEMATIS GOURIANA Roxb. Hort. Beng. (1814) 43, *nomen nudum*, Fl. Ind. ed. 2, 2 (1832) 670; DC. Syst. 1 (1818) 138, Prodr. 1 (1824) 3; Miq. Fl. Ind. Bat. 1² (1858) 4; F.-Vill. Novis. App. (1880) 1; Vidal Sinopsis Atlas (1883) 11, t. 1, f. B, Phan. Cuming. Philip. (1885) 91, Rev. Pl. Vasc. Filip. (1886) 35.

Clematis vitalba Linn. subsp. *cumingii* O. Kuntze et *javanica* O. Kuntze in Verh. Bot. Verein Prov. Brandenb. 26 (1885) 100; Hallier f. in Ann. Jard. Bot. Buitenz. 14 (1897) 271, 272.

Northern Luzon to Mindanao, *B. S. 7631, 7670, 27597, 32790 Ramos, 38005 Ramos & Edaña, Merrill 7690, 4424, Phil. Pl. 1799, 1185, Elmer 5697, 17917, 18325, 13342, 11187*. In thickets and forests at low and medium altitudes, ascending to 1,500 m. India to Malaya, or, if considered as a variety of *Clematis vitalba* Linn., extending to Europe.

Local names: Alimbuñgábung (Bon.); bubug (Bon.); buklo (Mbo.); kalupad (Bis.); kamugna (Bag.); salingbuábong (Ig.); salingñuábong (Ig.); saliuábung (Ig.); umibuábong (Bon.).

CLEMATIS LESCHENAUULTIANA DC. Syst. 1 (1818) 151, Prodr. 1 (1824) 6; Miq. Fl. Ind. Bat. 1² (1858) 3; Rolfe in Journ. Bot. 23 (1885) 209; Vidal Rev. Pl. Vasc. Filip. (1886) 35; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 348.

Clematis acuminata DC. var. *leschenaultiana* O. Kuntze in Verh. Bot. Verein Prov. Brandenb. 26 (1885) 167.

Luzon (Benguet), Mindanao (Davao), *F. B.* 25161 *Garcia*, 10907 *Curran*, *B. S.* 5842 *Ramos*, *Williams* 2535, *Vanoverbergh* 999, *Elmer* 5923, *Loher* 5. In thickets, altitude 1,000 to 1,600 m.

Var. **SUBGLABRIFOLIA** Merr. in Philip. Journ. Sci. 10 (1915) Bot. 303.

Luzon (Lepanto, Ifugao), *F. B.* 14496 *Darling*, *B. S.* 19813 *McGregor*, 37809, 37638 *Ramos & Edaño*, *Merrill Phil. Pl.* 1348. In thickets at or above 1,500 m altitude. Sumatra, Java, Moluccas, Formosa, Indo-China, southern China, the variety endemic.

Local names: Boakang (Ig.); dipig (Ig.); kamakang (Bon.).

CLEMATIS MACGREGORII Merr. in Philip. Journ. Sci. 5 (1910) Bot. 347.

Luzon (Benguet), *B. S.* 8828 (not 9929!), 8372 *McGregor*, 4347 *Mearns*. Lower borders of the mossy forest, altitude about 2,000 m. Endemic.

CLEMATIS MEYENIANA Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 297; Hook. f. in Curtis's Bot. Mag. III 59 (1903) t. 7897; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 98.

Luzon (Bontoc, Benguet), *Clemens* 9163, *Vanoverbergh* 1118, 404, *Williams* 1323, *Merrill* 4777, *B. S.* 31947 *Santos*, 37680, 38049 *Ramos & Edaño*. In thickets, borders of forests, etc., altitude 1,600 to 2,200 m. Burma to central and southern China to the Riu Kiu Islands, Formosa, and Indo-China.

The Philippine form is var. *insularis* Sprague in Kew Bull. (1916) 46, extending from the Riu Kiu Islands to Formosa and northern Luzon.

Local names: Bubug (Bon.); kanei (Ig.); tiktik (Ig.).

CLEMATIS SMILACIFOLIA Wall. in As. Research. 13 (1820) 402; Hook. f. Fl. Brit. Ind. 1 (1872) 2; F.-Vill. Novis. App. (1880) 1; Vidal Phan. Cuming. Philip. (1885) 91, Rev. Pl. Vasc. Filip. (1886) 35. *Clematis smilacina* Blume Bijdr. (1825) 1; Hallier f. in Bull. Herb. Boiss. 6 (1898) 215.

Luzon (Benguet, Bontoc, Laguna, Tayabas, Rizal, Sorsogon), Polillo, Mindoro, Palawan, *Williams* 1045, *Elmer* 6526, *B. S.* 10409, 10706 *McGregor*, 29000, 29595, 38138 *Ramos & Edaño*. Usually in damp thickets of forests at medium altitudes, in some places at sea level; in Benguet ascending to 1,600 m altitude. India to southern China through Malaya to the Moluccas.

Hallier f. claims that the Malayan and Philippine form, *Clematis smilacina* Blume, is specifically distinct from the Indian *Clematis smilacifolia* Wall.

Local names: Amnok (Ig.); anatel (Ig.).

3. NARAVELIA de Candolle

NARAVELIA ANTONII Elm. Leaf. Philip. Bot. 8 (1915) 2800.

Naravelia philippinensis Merr. in Philip. Journ. Sci. 11 (1916) Bot. 7.

Luzon (Sorsogon), Mindanao (Agusan), *B. S.* 23459 *Ramos*, *Elmer* 13734, 17314. In thickets and forests at medium altitudes, ascending to 1,000 m. Endemic.

Local name: Obanon (Mbo.).

NARAVELIA LAURIFOLIA Wall. Cat. (1831) No. 4685, *nomen nudum*; Hook. f. & Th. Fl. Ind. (1855) 3; Miq. Fl. Ind. Bat. 1² (1858) 2; F.-Vill. Novis. App. (1880) 2; Vidal Phan. Cuming. Philip. (1885) 91, Rev. Pl. Vasc. Filip. (1886) 35; Merr. Sp. Blancoanae (1918) 144.

Atragene zeylanica Blanco Fl. Filip. (1837) 461, ed. 2 (1845) 321, ed. 3, 2 (1878) 231, non Linn.

Naravelia zeylanica F.-Vill. Novis. App. (1880) 2; Vidal Sinopsis Atlas (1883) 11, t. 1, f. A, non Poir.

Clematis zeylanica Poir. var. *laurifolia* O. Kuntze et var. *filipetala* O. Kuntze in Verh. Bot. Verein Prov. Brandenb. 26 (1885) 122.

Northern Luzon to Mindanao, *B. S.* 27106, 7238, 5752 *Ramos*, 36735 *Ramos* & *Edaño*, 26719 *Fénix*, *Elmer* 5550, 13537, *Wenzel* 1482, *Merrill* 1338, *Phil. Pl.* 885. In thickets and forests at low and medium altitudes; rare or local. India (Eastern Peninsula) to Malaya.

Local names: Bubulo (Tag.); oái-ni-pangláu (Ilk.); puñgakon (Mbo.).

NARAVELIA LOBATA (Llanos) Merr. Sp. Blancoanae (1918) 144.

Atragene lobata Llanos Frag. Pl. Filip. (1851) 73; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 57.

Naravelia loheri Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 98; Merr. Fl. Manila (1912) 202.

Luzon (Pangasinan, Nueva Ecija, Bulacan, Rizal), *Merrill* 4101, *Phil. Pl.* 735, *Sp. Blancoanae* 656, *Loher* 6. In dry thickets at low altitudes. Endemic.

Local name: Parapit-hángin (Tag.).

4. RANUNCULUS Tournefort

RANUNCULUS LAXUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 445.

Luzon (Bontoc), *Vanoverbergh* 1780, 3647. Along small streams, altitude 1,650 to 1,750 m; allied to the Australian and New Zealand *R. plebeius* R. Br. and *R. hirtus* Banks & Sol. Endemic.

RANUNCULUS PHILIPPINENSIS Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 99; Merr. op. cit. 5 (1910) Bot. 348.

Luzon (Bontoc, Lepanto, Benguet), *Merrill* 4508, 4750, 4570, 6608, *Phil. Pl.* 863, *B. S.* 31741 *Santos*, 8444 *McGregor*, 4295, 4387 *Mearns*, 7004 *Ramos*. In open swampy places and in mossy forests on the highest mountains, altitude 2,250 to 2,750 m; allied to the Australian-New Zealand *R. lappa-ceus* Sm. Endemic.

5. THALICTRUM Tournefort

THALICTRUM PHILIPPINENSE C. B. Rob. in Bull. Torr. Bot. Club. 35 (1908) 65, 74.

Luzon (Benguet), *Williams* 957, 1137, *Merrill* 7767, *B. S.* 31972 *Santos*. On very steep slopes, cliffs, etc., in wet places, altitude 1,500 to 2,100 m; rare. Closely allied to *T. urbainii* Hayata (*T. fauriei* Hayata, non Lév.) of Formosa. Endemic.

BERBERIDACEAE

1. BERBERIS Tournefort

BERBERIS BARANĐANA Vidal Rev. Pl. Vasc. Filip. (1886) 45; Ceron Cat. Pl. Herb. Manila (1892) 402; Schneider in Bull. Herb. Boiss. II 5 (1904) 402; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 348.

Luzon (Bontoc, Lepanto, Benguet), *B. S.* 31749 Santos, 8864 McGregor, 37608 Ramos & Edaño, Merrill 4506, 4607, 6601, Elmer 8799, Williams 1347. In thickets, ravines, and in the mossy forest, altitude 1,600 to 2,300 m. Formosa. I fail to find any reason for distinguishing the Formosan *B. kawakamii* Hayata. The Philippine representative of *Berberis wallichiana* DC.

Local names: Bagis (Ig.); subit (Ig.).

2. MAHONIA de Candolle

MAHONIA PHILIPPINENSIS Takeda in Not. Bot. Gard. Edinburg 6 (Jan., 1917) 244, t. 32, 36, f. 218-222.

Mahonia philippinensis Schneider in Bot. Gaz. 63 (June, 1917) 520.

Mahonia nepalensis Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 190, non DC.

Luzon (Benguet), Elmer 5929, Merrill 7659, Topping 18, Williams 1460, F. B. 10816 Curran, 14152 Merritt, 18315 Alvarez, 25150 Leaño. In damp thickets about limestone boulders, altitude 1,400 to 1,800 m. Endemic.

MENISPERMACEAE

1. PYCNARRHENA Miers

PYCNARRHENA CELEBICA (Boerl.) Diels in Engl. Pflanzenreich 46 (1910) 53; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 266.

Cocculus celebicus Boerl. Cat. Hort. Bogor. (1899) 40.

Luzon (Cagayan, Nueva Ecija, Laguna, Tayabas), *B. S.* 13918 Ramos, 29188 Ramos & Edaño, 25452 Yates, F. B. 26831 Catalan, 22157 Alvarez. In forests at low and medium altitudes. Celebes.

Local name: Bagat (Bag.).

PYCNARRHENA ELLIPTICA Diels in Engl. Pflanzenreich 46 (1910) 54, Leaf. Philip. Bot. 4 (1911) 1163.

Palawan, *B. S.* 211 Bermejós. In forests at low altitudes. Endemic.

PYCNARRHENA MANILLENSIS Vidal Rev. Pl. Vasc. Filip. (1886) 45; Ceron Cat. Pl. Herb. Manila (1892) 14; Diels in Engl. Pflanzenreich 46 (1910) 52, Leaf. Philip. Bot. 4 (1911) 1163; Merr. Fl. Manila (1912) 203.

Luzon (Nueva Ecija, Rizal, Tayabas, Laguna, Batangas, Sorsogon), Alabat, Samar, Leyte, Negros, Mindanao (Zamboanga), *B. S.* 3346, 4826, 13416, 22395, 19411, 24407, 17562 Ramos, 25561 Yates, Elmer 15310, 17648, Loher 5744, Merrill 10504. In thickets and forests at low and medium altitudes. Endemic.

Local names: Ambal (Tag.); haluot (C. Bis.); huluot (Bis.); mamañgal (Tag.).

PYCNARRHENA MEMBRANIFOLIA Merr. in Philip. Journ. Sci. 20 (1922) 382.

Mindanao (Zamboanga), *B. S.* 37536 Ramos & Edaño. In forests at low altitudes.

Local name: Dalupat (Sub.).

PYCNARRHENA MERRILLII Diels in Engl. Pflanzenreich 46 (1910) 52, Leaf. Philip. Bot. 4 (1911) 1163.

Luzon (Ilocos Norte, Apayao, Laguna, Tayabas, Bataan), Polillo, Mindoro, Mindanao, *Merrill 1201, Elmer 11091, 12000, B. S. 27140, 23839, 16629 Ramos, 28218 Fénix, F. B. 1218 Borden*. In forests at low and medium altitudes. Endemic.

Local name: Basulai (Bag.).

2. HAEMATOCARPUS Miers

HAEMATOCARPUS SUBPELTATUS Merr. in Philip. Journ. Sci. 14 (1919) 383.

Luzon (Camarines), *B. S. 33750 Ramos & Edaña*. In forests at low altitudes. Endemic.

3. ARCANGELISIA Beccari

ARCANGELISIA FLAVA (Linn.) Merr. Interpret. Herb. Amb. (1917) 222.

Menispermum flavum Linn. in Stickm. Herb. Amb. (1754) 14, Amoen.

Acad. 4 (1759) 128, Syst. ed. 10 (1759) 992.

Menispermum flavescens Lam. Encycl. 4 (1797) 98.

Anamirta flavescens Miq. Fl. Ind. Bat. 1² (1858) 79.

Cocculus flavescens DC. Syst. 1 (1818) 520.

Arcangelisia inchyta Becc. Malesia 1 (1877) 147.

Anamirta lemniscata Miers in Ann. Nat. Hist. III 14 (1864) 51.

Arcangelisia lemniscata Becc. Malesia 1 (1877) 147; Merr. in Philip.

Journ. Sci. 3 (1908) Bot. 406; Diels in Engl. Pflanzenreich 46

(1910) 106, f. 38, Leaf. Philip. Bot. 4 (1911) 1163.

Tuba flava Rumph. Herb. Amb. 5 (1747) 38, t. 24.

Batan Islands to Palawan and Mindanao, scattered in thickets and forests at low and medium altitudes. Java and Borneo to New Guinea.

Local names: Abústra (Ilk.); abútra (Ilk.); albótra (S. L. Bis.); alibódra (P. Bis.); búti (Tag.); lágtal (S. L. Bis.); lágtan (P. Bis.); lágtang (Tag., Bik., Sul.); suma (Tag., Pamp.); taua (Bag.); uplíg (Ilk.).

4. ANAMIRTA Colebrooke

ANAMIRTA COCCULUS (Linn.) W. & A. Prodr. 1 (1834) 446; Miq. Fl.

Ind. Bat. 1² (1858) 78; F.-Vill. Novis. App. (1880) 8; Vidal Cat.

Pl. Prov. Manila (1880) 16; Ceron Cat. Pl. Herb. Manila (1892)

13; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 17, Philip.

Journ. Sci. 1 (1906) Suppl. 52, Sp. Blancoanae (1918) 145; Diels

in Engl. Pflanzenreich 46 (1910) 108, f. 40, Leaf. Philip. Bot. 4

(1911) 1165.

Menispermum cocculus Linn. Sp. Pl. (1753) 340; Blanco Fl. Filip.

(1837) 809, ed. 2 (1845) 557, ed. 3, 3 (1879) 216.

Northern Luzon to southern Mindanao. In thickets at low and medium altitudes, scattered. India, through Malaya to New Guinea.

Local names: Arai (Bag.); balasin (Tag., Bis.); bayáti (Tag.); baya-tíng (Ilk.); labtáng (Ilk., Ig.); lágtal (Bis.); lágtang (Bis., Mbo., Sul.); lákdang (Bis.); láktang (Tag., Bis., Pamp.); lánta (Tag., Pamp.); lígtang (Tag.); líktang (Tag., Bis.); suma (Tag.).

The local names are greatly confused as between *Anamirta* and *Arcangelisia*; this species has white wood, and its fruits are used for poisoning fish, while *Arcangelisia* has yellow wood.

5. TINOMISCIMUM Miers

TINOMISCIMUM MOLLE Diels in Philip. Journ. Sci. 8 (1913) Bot. 157.

Luzon (Nueva Vizcaya), *B. S. 11359 McGregor*. Endemic.

TINOMISCIMUM PHILIPPINENSE Miers in Engl. Pflanzenreich 46 (1910) 116, *Leafl. Philip. Bot. 4* (1911) 1164.

Luzon (Pangasinan, Tayabas, Laguna), Biliran, Mindanao (Lanao, Davao), *Elmer 9090, 17223* as *Parabaena dielsii* Elm., *Whitford 824, F. B. 20984 Villamil, B. S. 18989, 18766, 18498 McGregor, Clemen 649, 1025*. In forests at low and medium altitudes. Endemic.

Local names: Bayáting (Pamp.); kalumpánġi (Bag.).

6. FIBRAUREA Loureiro

FIBRAUREA CHLOROLEUCA Miers in Ann. Nat. Hist. III 13 (1864) 489; Diels in Engl. Pflanzenreich 46 (1910) 120, *f. 43*; Merr. in Philip. Journ. Sci. 17 (1920) 249.

Dinagat, *B. S. 35224, 35229 Ramos & Pascasio*. In forests along streams at low altitudes. Malay Peninsula, Sumatra, Java, Borneo.

7. TINOSPORA Miers

TINOSPORA MERRILLIANA Diels in Engl. Pflanzenreich 46 (1910) 137, *Leafl. Philip. Bot. 4* (1911) 1164.

Mindanao (Lanao, Bukidnon, Davao, Misamis), *Clemens 525, Elmer 11639, 10895, 10882, F. B. 4748 Mearns & Hutchinson, B. S. 39171 Ramos & Edaño*. In thickets and forests at medium altitudes. Endemic.

Local names: Kalumpánġi (Bag.); kari (Bag.); lagauat (Bag.).

TINOSPORA NEGROTICA Diels in Engl. Pflanzenreich 46 (1910) 137, *Leafl. Philip. Bot. 4* (1911) 1164.

Negros, Panay, Catanduanes, Mindanao (Lanao), *B. S. 30238 Ramos, 30962, 31222, 31442 Ramos & Edaño, Elmer 9468*. In forests at medium altitudes. Endemic.

Local name: Balang-batang (C. Bis.).

TINOSPORA RETICULATA Miers in Ann. Nat. Hist. III 13 (1864) 322, *Contrib. Bot. 3* (1864) 36; Vidal Phan. Cuming. Philip. (1885) 93, *Rev. Pl. Vasc. Filip. (1886) 44*; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 52, 3 (1908) Bot. 406, *Fl. Manila (1912) 204*; Diels in Engl. Pflanzenreich 46 (1910) 143, *Leafl. Philip. Bot. 4* (1911) 1164.

Batan Islands southward to Mindanao, *Merrill 2541, 7546, 8505, Elmer 18326, 15260, 16606, 11044, 11189, B. S. 3614 Fénie, 17890 Otones*. In dry thickets at low altitudes. Endemic.

Local names: Dapsuk (Ig.); kamibai (Iv.); kasopo (Bag.); makabúhaina-putí (Tag.).

TINOSPORA RUMPHII Boerl. Cat. Hort. Bogor. (1901) 116, excl. syn. *Menispermum crispum* Linn.; Merr. Interpret. Herb. Amb. (1917) 220, *Sp. Blancoanae* (1918) 145.

Menispermum rimosum Blanco Fl. Filip. (1837) 810, ed. 2 (1845) 558, ed. 3, 3 (1879) 217, non Spreng.

Tinospora crispa F.-Vill. Novis. App. (1880) 7, non Miers.

Tinospora cordifolia F.-Vill. Novis. App. (1880) 8, non Miers.

? *Cocculus cordifolius* Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 298, non DC.

Luzon, Culion, Basilan, *Merrill Sp. Blancoanae* 903, 1003. In and about towns in thickets, probably in most or all islands as it is frequently planted; perhaps introduced. Malaya.

Local names: Makabúhai (Tag., Bis., Ilk.); paliaban (Bis.); panauan (Bis.); pañgiauan (Bis.); pañgiauban (Bis.); sañgaunau (Bag.); taganagtagua (Bis.).

8. PARABAENA Miers

PARABAENA DENUDATA Diels in Engl. Pflanzenreich 46 (1910) 147, Leaf. Philip. Bot. 4 (1911) 1164.

Samar, Negros, Biliran, Mindanao (Zamboanga), Basilan, *F. B. 13718 Curran, B. S. 18965 McGregor, 17408, 17547 Ramos, 15467 Reillo, Elmer 9706, Williams 2137*. In thickets and forests at low and medium altitudes. Endemic.

PARABAENA ECHINOCARPA Diels in Philip. Journ. Sci. 8 (1913) Bot. 157.

Luzon (Sorsogon), Camiguin de Misamis, Samar, Leyte, *Elmer 16816, 15325, 14224, B. S. 14722, 17443 Ramos*. In thickets and forests at low and medium altitudes. Endemic.

PARABAENA ELMERI Diels in Engl. Pflanzenreich 46 (1910) 147, Leaf. Philip. Bot. 4 (1911) 1164.

Luzon (Cagayan, Union, Batangas), *Elmer 5633, F. B. Merrill Phil. Pl. 1844, Adduru 198*. In thickets and forests at low and medium altitudes. Endemic.

PARABAENA PHILIPPINENSIS Merr. ex Diels in Engl. Pflanzenreich 46 (1910) 148, Leaf. Philip. Bot. 4 (1911) 1164.

Luzon (Laguna, Rizal), *B. S. 1024 Ramos, F. B. 24877 Mabesa, Elmer 17791*. In thickets and forests at low and medium altitudes; closely allied to *P. elmeri* Diels. Endemic.

9. HYPSERPA Miers

HYPSERPA CUSPIDATA (Wall.) Miers in Ann. Nat. Hist. II 7 (1851) 40, Contrib. Bot. 3 (1871) 102, t. 108; Diels in Engl. Pflanzenreich 46 (1910) 206, f. 71, Leaf. Philip. Bot. 4 (1911) 1165; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 303.

Cocculus cuspidatus Wall. Cat. (1832) No. 4960, *nomen nudum*.

Limacia cuspidata Hook. f. & Th. Fl. Ind. 1 (1855) 189; Rolfe in Journ. Bot. 23 (1885) 210; Vidal Phan. Cuming. Philip. (1885) 93, Rev. Pl. Vasc. Filip. (1886) 44; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 52, 3 (1908) Bot. 406.

Zanthoxylum triplinerve Turcz. in Bull. Soc. Nat. Mosc. 36¹ (1863) 597; F.-Vill. Novis. App. (1880) 35; Vidal Rev. Pl. Vasc. Filip. (1886) 74; Perk. Frag. Fl. Philip. (1905) 161.

Hypserpa praevaricata Miers Contrib. Bot. 3 (1871) 103.

Luzon (Ilocos Norte), Sibuyan, Negros, Palawan, Mindanao, *Cuming 1252, B. S. 27301 Ramos, 36660, 37034 Ramos & Edaño, Merrill 9230, 9235,*

Phil. Pl. 1220, Elmer 12101. In thickets at low and medium altitudes. India and Ceylon to Sumatra, Java, and Borneo.

Local names: Lalapau (Sub.); mamana (Sub.).

HYPSERPA JAGORII Diels in Engl. Pflanzenreich 46 (1910) 211.

Northern Luzon (Ilocos Norte, Nueva Vizcaya, Bataan, Rizal), Negros, *B. S. 7610 Ramos, 19384 McGregor, F. B. 3112 Meyer, 451 Ahern's collector.* In thickets at low and medium altitudes. Endemic.

10. LIMACIA Loureiro

LIMACIA BLUMEI (Boerl.) Diels in Engl. Pflanzenreich 46 (1910) 215; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 266.

Cocculus blumei Boerl. Cat. Hort. Bogor. (1899) 40.

Cocculus umbellatus Teysm. & Binn. Cat. Bogor. (1866) 173, non Steud.

Bancalan, Mindanao (Davao), *Weber, Piper 427.* In thickets and forests at low altitudes. Malaya, but definitely known as extra-Philippine only from specimens cultivated at Buitenzorg, Java.

LIMACIA VELUTINA (Wall.) Miers in Ann. Nat. Hist. II 7 (1851) 43, Contrib. Bot. 3 (1871) 110; Miq. Fl. Ind. Bat. 1² (1858) 80; F.-Vill. Novis. App. (1880) 8; Diels in Engl. Pflanzenreich 46 (1910) 215, Leaf. Philip. Bot. 4 (1911) 1165.

Cocculus velutinus Wall. Cat. (1832) No. 4970, *nomen nudum.*

Mindanao, (Zamboanga, Lanao), Basilan, *Clemens 961, 881, Hallier.* In thickets and forests at low and medium altitudes. Burma to the Malay Peninsula, Sumatra, and Celebes.

11. PERICAMPYLUS Miers

PERICAMPYLUS GLAUCUS (Lam.) Merr. Interpret. Herb. Amb. (1917) 219.

Menispermum glaucum Lam. Encycl. 4 (1797) 100.

Cocculus glaucus DC. Syst. 1 (1818) 521.

Cocculus incanus Colebr. in Trans. Linn. Soc. 13 (1822) 57, t. 17.

Pericampylus incanus Miers in Ann. Nat. Hist. II 7 (1851) 40;

Miq. Fl. Ind. Bat. 1² (1858) 83; Ceron Cat. Pl. Herb. Manila

(1892) 13; Diels in Engl. Pflanzenreich 46 (1910) 217, f. 74,

Leaf. Philip. Bot. 4 (1911) 1165.

Throughout the Philippines in open thickets at low and medium altitudes. India through Malaya to the Moluccas.

Local names: Botang-bótang (C. Bis.); gapísilid (Sub.); hah-ún (Yak.); ha-un (Sul.); lagauat (Bag.); pamago (Bik.); pisok (Ig.); silong-pugo (Tag.); tugiantugían (Tag.).

12. DIPLOCLISIA Miers

DIPLOCLISIA GLAUDESCENS (Blume) Diels in Engl. Pflanzenreich 46 (1910) 225, f. 77, A-L, Leaf. Philip. Bot. 3 (1911) 1166.

Cocculus glaucescens Blume Bijdr. (1825) 25.

Mindanao (Lanao, Zamboanga), Bongao, *Clemens, F. B. 15217 Klemme, B. S. 36294 Yates.* In open forests at low and medium altitudes. India to southern China and Malaya.

13. **COCCULUS** de Candolle

COCCULUS LAURIFOLIUS DC. Syst. 1 (1818) 530, Prodr. 1 (1824) 100; Diels in Engl. Pflanzenreich 46 (1910) 239; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 81.

Luzon (Bontoc), Mindoro, *Vanoverbergh* 1237, *B. S.* 39393, 39394 *Ramos*. In thickets, altitude 700 to 1,200 m. India to China and Japan southward to Java.

COCCULUS SARMENTOSUS (Lour.) Diels in Engl. Pflanzenreich 46 (1910) 233, Leaf. Philip. Bot. 3 (1911) 1166.

Nephroia sarmentosa Lour. Fl. Cochinch. (1790) 692.

Babuyan Islands, Luzon (Ilocos Norte), Mindanao (Lanao), *B. S.* 4034 *Fénix*, 27213 *Ramos*, *Clemens* 749. In thickets at low altitudes, in Mindanao ascending to 700 m. Southern China, Malay Peninsula, Java, Mascarene Islands.

Var. **STENOPHYLLUS** Merr. in Philip. Journ. Sci. 13 (1918) Bot. 10.

Luzon (Ilocos Norte), *B. S.* 27231 *Ramos*. Endemic.

COCCULUS TRILOBUS (Thunb.) DC. Syst. 1 (1818) 232, Prodr. 1 (1824) 98; Diels in Engl. Pflanzenreich 46 (1910) 232, Leaf. Philip. Bot. 3 (1911) 1166.

Menispermum trilobum Thunb. Fl. Jap. (1784) 194.

Cocculus cynanchoides Presl Rel. Haenk. 2 (1835) 79; F.-Vill. Novis. App. (1880) 8.

Nephroica cynanchoides Miers Contrib. Bot. 3 (1864-71) 267.

Batan Islands, northern Luzon, *B. S.* 2763 *Fénix*, *Haenke*. Japan, northern to southeastern China.

14. **STEPHANIA** Loureiro

STEPHANIA CATOSEPALA Diels in Engl. Pflanzenreich 46 (1910) 268, f. 90, H-O, Leaf. Philip. Bot. 3 (1911) 1166.

Luzon (Benguet), *Elmer* 5851, *Merrill* 9705, *Phil. Pl.* 828, *B. S.* 31806 *Santos*, *B. S.* 2511, 2725 *Mearns*. Sprawling over limestone ledges and boulders, altitude 1,300 to 2,000 m. Endemic.

Local name: Itab (Ig.).

STEPHANIA FORSTERI (DC.) A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 36; Diels in Engl. Pflanzenreich 46 (1910) 278, Leaf. Philip. Bot. 3 (1911) 1167.

Cocculus forsteri DC. Syst. 1 (1818) 517.

Stephania exigua Miers Contrib. Bot. 3 (1871) 228.

Luzon (Pampanga), Mindoro, Marinduque, Mindanao, (*Cuming* 1533), *Bolster* 71, *De Vore & Hoover* 214. In thickets at low and medium altitudes. Java to Polynesia.

Local name: Ha-un (Sul.).

STEPHANIA JAPONICA (Thunb.) Miers in Ann. Nat. Hist. III 18 (1866) 14, Contrib. Bot. 3 (1871) 213; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 406; Diels in Engl. Pflanzenreich 46 (1910) 277, Leaf. Philip. Bot. 3 (1911) 1166.

Menispermum japonicum Thunb. Fl. Jap. (1784) 195.

Cissampelos psilophylla Presl Rel. Haenk. 2 (1835) 80; F.-Vill. Novis. App. (1880) 8.

Stephania corymbosa Turcz. in Bull. Soc. Nat. Mosc. 27² (1854) 281, non Blume.

Stephania hernandifolia F.-Vill. Novis. App. (1880) 8; Vidal Phan. Cuming Philip. (1885) 93, Rev. Pl. Vasc. Filip. (1886) 45, non Walp.

Batan Islands, Luzon (Cagayan, Ilocos Norte, Bontoc, Lepanto, Benguet, Batangas, Rizal, Laguna), Camiguin de Misamis, *B. S. 5996, 16623, 23820, 13717, 83121* Ramos, *Elmer 6412*. In thickets and forests at low and medium altitudes. India to Japan, China, and Formosa.

Local names: Kureng (Iv.); lektan (Bon.); malabúta (Ig.); maratúgi (Ilk.).

STEPHANIA MERRILLII Diels in Engl. Pflanzenreich 46 (1910) 268, Leaf. Philip. Bot. 3 (1911) 1166.

Luzon (Sorsogon), Mindoro, Negros, Mindanao (Zamboanga, Davao). In thickets and forests at medium altitudes, ascending to 1,800 m in Mindoro. Endemic.

STEPHANIA RAMOSII Diels ex Merr. in Philip. Journ. Sci. 7 (1912) Bot. 265.

Luzon (Benguet), *B. S. 13487* Ramos. Endemic.

15. CISSAMPELOS Linnaeus

CISSAMPELOS PAREIRA Linn. Sp. Pl. (1753) 1031; DC. Prodr. 1 (1824) 101; Blanco Fl. Filip. (1837) 815, ed. 2 (1845) 563, ed. 3, 3 (1879) 227, *t. 432*; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 299; Miq. Fl. Ind. Bat. 1² (1858) 85; F.-Vill. Novis. App. (1880) 8; Vidal Sinopsis Atlas (1883) 11, *t. 1, f. C*, Phan. Cuming. Philip. (1885) 93, Rev. Pl. Vasc. Filip. (1886) 45; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 17, Philip. Journ. Sci. 1 (1906) Suppl. 52, Fl. Manila (1912) 204, Sp. Blancoanae (1918) 144; Diels in Engl. Pflanzenreich 46 (1910) 286, *f. 91, A-K*, Leaf. Philip. Bot. 3 (1911) 1167.

Cissampelos discolor DC. Syst. 1 (1818) 534; Miers Contrib. Bot. 3 (1864-71) 191.

Cissampelos discolor DC., var. *cardiophylla* A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 38; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 77.

Cissampelos cumingiana Turcz. in Bull. Soc. Nat. Mosc. 27² (1854) 283; Miers Contrib. Bot. 3 (1864-71) 190.

Common throughout the Philippines in thickets at low and medium altitudes. Pantropic.

Local names: Abobo (C. Bis.); bangbángau (Ilk.); batang-batang (Tag.); gulagulamánan (Tag.); hampapáre (Bis.); himpapára (Bis.); kaláad (Ilk.); kalakalamáyan (Tag.); kalkaláad (Ilk.); kauas (Sub.); kuskusípa (Ilk.); makabó-o (Tag.); malarúto (Ibn.); samang (Bon.); sampáre (Bis.); sansáu (Tag.); sincháó-sincháuan (Tag.); sinsau-sinsáuan (Tag.).

16. CYCLEA Arnott

CYCLEA MERRILLII Diels in Engl. Pflanzenreich 46 (1910) 312, Leaf. Philip. Bot. 3 (1911) 1167.

Luzon (Nueva Vizcaya, Pangasinan, Nueva Ecija, Bulacan, Rizal, Bataan, Laguna, Tayabas), Panay, *B. S.* 8149, 13578, 22428 Ramos, 29838 *Fénix*, 28836, 26349, 34136, 30891 Ramos & Edaña. In thickets and forests at low and medium altitudes. Endemic.

Local names: Abiab (P. Bis.); malatúgi (Negr.).

EXCLUDED SPECIES

CYCLEA PELTATA Hook. f. & Th., F.-Vill. Novis. App. (1880) 8 = *Cyclea wallichii* Diels.

EXCLUDED GENERA

COSCINIUM FENESTRATUM Colebr.; F.-Vill. Novis. App. (1883) 347.

TILIACORA RACEMOSA Colebr.; F.-Vill. l. c.

MAGNOLIACEAE

1. MAGNOLIA Linnaeus

MAGNOLIA COCO (Lour.) DC. Syst. 1 (1818) 459; Merr. in Philip. Journ. Sci. 11 (1916) Bot. 270.

Liriodendron coco Lour. Fl. Cochinch. (1790) 347.

Magnolia pumila Andr. Bot. Rep. 4 (1802-03), t. 266.

Talauma pumila Champ. in Hook. Journ. Bot. Kew Miscel. 3 (1851) 256; F.-Vill. Novis. App. (1880) 3; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 198, non Blume.

Luzon, *Merrill, Castillo*. Occasionally cultivated in Manila and in other large towns for ornamental purposes. Introduced from southern China.

2. TALAUMA Jussieu

TALAUMA ANGATENSIS (Blanco) Fl.-Vill. Novis. App. (1880) 3; Vidal Cat. Pl. Prov. Manila (1880) 15, Sinopsis Atlas (1883) 11, t. 3, f. A, Rev. Pl. Vasc. Filip. (1886) 38; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 15, 35 (1906) 7, Sp. Blancoanae (1918) 146.

Magnolia angatensis Blanco Fl. Filip. (1837) 859, ed. 2 (1845) 328, ed. 3, 2 (1878) 243.

Talauma gigantifolia F.-Vill. Novis. App. (1880) 4, non Miq.

Talauma luzonensis Warb. in Perk. Frag. Fl. Philip. (1905) 170; Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 8, Philip. Journ. Sci. 3 (1910) Bot. 406.

Talauma grandiflora Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 13, 35 (1906) 7.

Talauma oblongata Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 8.

Babuyan Islands and northern Luzon to Mindanao and Palawan, *B. S.* 4070, 29902 *Fénix*, 14538, 20577 Ramos, *Merrill* 1003, 9456, *Phil. Pl.* 1378, *F. B.* 314 Gammill, 24124 Velasco, 23989 Maneja, 19995 *Tamesis*, 17370, 17757 *Curran*, 18721 *Darling*. In forests at low and medium altitudes, now represented by more than 30 collections. Endemic.

Local names: Alintátau (Tag.); anobling (Tag., Bis.); balikásan (Tag.); kumárong (Tagb.); kumárun (Tagb.); malalaskálas (Tag.); malapiña (P. Bis.); malikaskásan (Bis.); marapiña (Ilk.); pala-pála (Pang.); pañgi-pañgi (C. Bis.); patáñgis (Sul.); pulupiña (P. Bis.); tabhisan (P. Bis.).

TALAUMA PULGARENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1809.

Palawan (Mt. Pulgar), *Elmer 13192*. On forested ridges, altitude about 600 m; rare. Especially characterized by its small flowers. Endemic.

TALAUMA PUBESCENS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 133.

Mindanao (Bukidnon, Lanao, Davao), *Clemens 636, Elmer 10858, B. S. 15924 Fénix, F. B. 25187 Alvarez*. In forests, altitude at and above 700 m. Endemic.

Local name: Manaiyakut (Bag.).

TALAUMA RETICULATA Merr. in Philip. Journ. Sci. 17 (1920) 249.

Dinagat, *B. S. 35187 Ramos & Pascasio*. In forests at low altitudes. Endemic.

TALAUMA VILLARIANA Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 307; Vidal Rev. Pl. Vasc. Filip. (1886) 38; Merr. in Govt. Lab. Publ. (Philip) 35 (1906) 7, Philip. Journ. Sci. 1 (1906) Suppl. 52, 5 (1910) Bot. 348.

Talauma mutabilis F.-Vill. Novis. App. (1880) 4; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 148; Vidal Cat. Pl. Prov. Manila (1880) 15, non Blume.

Talauma gitingensis Elm. Leaf. Philip. Bot. 4 (1912) 1479.

Northern Luzon to Mindanao, locally common in hill forests at low and medium altitudes, ascending to 1,600 m. Endemic.

Local names: Anobling (Tag.); batangis (Tag.); makalaskalas (Bik.); malasapsáp (Tag.); paraup (Neg.); patánis (Tag.); patañgis (Tag.).

EXCLUDED SPECIES

TALAUMA RUMPHII Blume; F.-Vill. Novis. App. (1880) 4.

3. MICHELIA Linnaeus

MICHELIA ALBA DC. Syst. 1 (1818) 449; Merr. Interpret. Herb. Amb. (1917) 223.

Michelia longifolia Blume Bijdr. (1825) 7; Fl. Jav. Magn. (1828) 12, t. 2, 3; Merr. Fl. Manila (1912) 205.

Luzon (Manila). Cultivated for ornamental purposes; a native of Java.

Local name: Champákang-putí (Tag.).

MICHELIA CHAMPACA Linn. Sp. Pl. (1753) 536; DC. Prodr. 1 (1824) 79; Blanco Fl. Filip. (1837) 462, ed. 2 (1845) 322, ed. 3, 2 (1878) 232, t. 191; F.-Vill. Novis. App. (1880) 4; Vidal Rev. Pl. Vasc. Filip. (1886) 38; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 15; Merr. Fl. Manila (1912) 205, Interpret. Herb. Amb. (1917) 223, Sp. Blancoanae (1918) 146.

Cultivated for ornamental purposes in Manila and in other towns; a native of India, now cultivated in most tropical countries.

Local names: Champáka (Tag.); champáka-laag (Sul.); champákang-pulá (Tag.); sampáka (Tag.).

MICHELIA CUMINGII Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 100.

Michelia parviflora Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 70, Philip. Journ. Sci. 1 (1906) Suppl. 53, non DC.

Luzon (Benguet, Bontoc, Zambales, Bataan, Rizal, Laguna, Tayabas, Batangas), Cebu, Mindanao (Misamis, Lanao), *Cuming 783, F. B. 2155, 3202 Ahern's collector, Merrill 2681, Phil. Pl. 364, 2000, B. S. 13682 Ramos*. In forests at medium altitudes, on some mountains ascending to 2,000 m. Very closely allied to and perhaps not distinct from the Japanese-Formosan *Michelia compressa* (Maxim.) Sargent. Endemic.

Local names: Bikbikan (Tag.); boga (Bag.); hindang (C. Bis.); margapále (Tag.); margapále bañgúhan (Tag.); rambirnan (Lan.); sudkad (C. Bis.); tara-tára (C. Bis.).

MICHELIA PLATYPHYLLA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 11.

Leyte, Mindanao (Agusan, Zamboanga), *F. B. 26866 Tomeldan, 24338 Cortez & Fernandez, B. S. 37223 Ramos & Edaño*. In second-growth forests at low altitudes. Endemic.

Local names: Hañgilo (S. L. Bis., Mbo.); gunsili (Sub.).

4. KADSURA Kaempfer

KADSURA APOENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2748.

Kadsura sulphurea Elm. op. cit. 2750.

Mindanao (Bukidnon, Agusan, Davao), Palawan, *Elmer 13505, 11718, Merrill 9504, B. S. 38640 Ramos & Edaño*. In forests, altitude 75 to 1,200 m; closely allied to *Kadsura scandens* Blume. British North Borneo, Mt. Kinabalu, *Clemens 10394*.

Local names: Kanogon (Mbo.); lomabog (Bag.).

KADSURA MACGREGORII Merr. in Philip. Journ. Sci. 5 (1910) Bot. 177.

Luzon (Benguet), *B. S. 8340 McGregor*. In the mossy forests at Pauai, altitude above 2,100 m. Closely allied to *Kadsura japonica* Juss. Endemic.

KADSURA PAUCIDENTICULATA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 176.

Luzon (Benguet), *B. S. 8498 McGregor*. In the mossy forest at Pauai above an altitude of 2,100 m; closely allied to the preceding species. Endemic.

KADSURA PHILIPPINENSIS Elm. Leaf. Philip. Bot. 1 (1908) 277.

Luzon (Benguet, Bontoc, Laguna, Sorsogon), Mindanao, (Davao, Bukidnon, Lanao), *B. S. 12629 Fénix, 27965 Ocampo, 38809 Ramos & Edaño, 23531 Ramos, Elmer 8700, 11498, 17032 (K. sorsogonensis Elm.), Clemens*. In thickets and forests, altitude 900 to 1,800 m. This seems to be very close to *Schizostigma axillare* (Blume) Hook. f. & Th. Endemic.

Local names: Banauan (Bag.); bitokaan (Ig.).

KADSURA SCANDENS Blume Fl. Jav. Schizand. (1828) 9, t. 1; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 422.

Mindanao (Lanao), *Clemens 683*. On forested slopes, altitude about 800 m. Malay Peninsula to Java and Borneo.

Kadsura cauliflora Blume op. cit. 11, t. 2, does not appear to be distinct.

5. *ILLICIUM* Linnaeus

ILLICIUM MONTANUM Merr. in Philip. Journ. Sci. 7 (1912) Bot. 81.

Luzon (Bontoc), *Vanoverbergh* 1048. In forests, altitude 1,650 m. Endemic.

ILLICIUM PHILIPPINENSE Merr. in Philip. Journ. Sci. 4 (1910) Bot. 254.

Luzon (Zambales), Mindoro, *F. B. 9515 Curran & Merritt, 4411 Merritt, B. S. 5078 Ramos*. On exposed ridges and peaks of Mt. Tapulao and Mt. Halcon; altitude 1,600 to 2,100 m. Endemic.

EXCLUDED SPECIES

ILLICIUM ANISATUM Linn.; *F.-Vill. Novis. App.* (1880) 3.

ILLICIUM SAN-KI Perr. in Mém. Soc. Linn. Paris 3 (1824) 121; *C. B. Rob.* in Philip. Journ. Sci. 3 (1908) 305.

Perrottet described the fruits of one form of the star anise, and the leaves of some other plant, possibly a *Clausena*. Neither *Illicium anisatum* Linn. nor *I. verum* Hook f. occurs in the Philippines, but the fruits of both are imported in considerable quantities by the Chinese, among whom it is known as *sanki*, whence Perrottet's specific name.

6. *DRIMYS* Forster

DRIMYS PIPERITA Hook. f. Ic. II 5 (1852) *t. 396*; Stapf in Trans. Linn. Soc. Bot. 4 (1894) 128; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 53, 2 (1907) Bot. 272, 5 (1910) Bot. 349.

Northern Luzon to Mindanao, abundant on exposed ridges and peaks and in the mossy forests of the higher mountains of Luzon, Mindoro, Leyte, Negros, Panay, and Mindanao. Borneo to New Guinea.

Local names: Amutútin (Ig.); bauang (Mbo.); inotótan (Ig.); lupol (Bon.); malagus (Bag.).

EXCLUDED GENUS

SCHIZANDRA ELONGATA Hook. f.; *F.-Vill. Novis. App.* (1880) 4.

ANONACEAE

1. *GRIFFITHIANTHUS* Merrill

(*Griffithia* Maingay, non H. & H.)

GRIFFITHIANTHUS MERRILLII (C. B. Rob.) W. H. Brown ex Merr. in Philip. Journ. Sci. 10 (1915) Bot. 231.

Mitrephora merrillii C. B. Rob. in Bull. Torr. Bot. Club. 35 (1908) 67.

Mitrephora ferruginea Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 16, Philip. Journ. Sci. 1 (1906) Suppl. 54, non Boerl.

Mitrephora viridifolia Elm. Leaflet. Philip. Bot. 5 (1913) 1716.

Mitrephora maingayi Vidal Sinopsis Atlas (1883) 12, *t. 5, f. F*; *F.-Vill. Novis. App.* (1882) 347, non Hook. f. & Th.

Northern Luzon to Mindanao. In forests at low and medium altitudes. Borneo.

Local names: Batag-ukai (Bik.); binahían (Tag.); binalíuan (Tag.); buan (Lan.); dalínas (Tag.); dalinhás (Tag.); lanután (Tag., P. Bis.); lapnisan (S. L. Bis.); pagingá (Ibn.); pamahogan (Mbo.); pañganan (Neg.).

2. *SAGERAEA* Dalzell

SAGERAEA GLABRA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 12; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 203.

Luzon (Nueva Ecija, Tayabas, Camarines), Polillo, Samar, Biliran, Panay, Mindanao, Merrill 4021, Phil. Pl. 1683, B. S. 20808 Escritor, 9300 Robinson, 18547, 18781, 18814 McGregor, 31045 Ramos & Edaño, F. B. 25501 Labitag, 10462, 10572 Curran, 21176 Alvarez, 27002 Mallonga, 20530 Miranda, 28079 Alambra. In forests at low and medium altitudes. Endemic.

Local names: Aláhan (Sul.); aráhan (Bik.); homútom (Mbo.); lanután (Tag.); litúbau (Mag.); malimbató (Lan.); manálau (Tag.); paloai (Bik.); palusai (S. L. Bis.).

3. *UVARIA* Linnaeus

UVARIA ALBA Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 17, Philip. Journ. Sci. 1 (1906) Suppl. 65.

Luzon (Apayao, Pangasinan, Zambales, Bataan), B. S. 28140, 29922 Félix, 26825, 26802 Edaño, F. B. 1924 Borden, 50 Barnes, Williams 328, 519, Merrill 3274, 3859, Baker 3565, Elmer 6637. In forests at low and medium altitudes. Endemic.

Local names: Kakausan (Sbl.); lalá (Ibn.); súsong-kalabáu (Tag.).

UVARIA ELLIPTIFOLIA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 229.

Luzon (Sorsogon), Biliran, Leyte, B. S. 18878 McGregor, Elmer 16039, F. B. 7331 Everett. In forests at low and medium altitudes. Endemic.

Local name: Sagin-ságin (P. Bis.).

UVARIA LANCIFOLIA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 228.

Luzon (Zambales, Tayabas), Mindoro, Mindanao (Zamboanga), Gates 5495, 6647, B. S. 25562 Yates, 16394 Reillo, F. B. 5379 Merritt. In thickets or forests at low and medium altitudes. Endemic.

Local name: Alalagát (Ilk.).

UVARIA LEYTENSIS (Elm.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 230.

Unona leytensis Elm. Leaf. Philip. Bot. 5 (1913) 1744.

Luzon (Bataan, Laguna), Leyte, Mindanao (Agusan, Zamboanga), Merrill 3301, Elmer 7365, 13880, Wenzel 1761, F. B. 87 Barnes, 2051 Borden, 19781 Whitford, B. S. 24059 Ramos. In forests at low altitudes. Endemic.

Local names: Dugumatan (Mbo.); súsong-kalabáu (Tag.).

UVARIA MACGREGORII Merr. in Philip. Journ. Sci. 14 (1919) 394.

Panay, Mindanao (Misamis), B. S. 32249 McGregor, Cuming 1607. In thickets at low altitudes. Endemic.

UVARIA MICRANTHA (DC.) Hook. f. & Th. Fl. Ind. 1 (1855) 103; King in Ann. Bot. Gard. Calcutta 4 (1893) 26, t. 18; Finet & Gagnep. in Lecomte Fl. Gén. Indo-Chine 1 (1907) 54; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 230.

Guatteria micrantha DC. Mém. Anon. (1832) 42.

Luzon (Batangas, Sorsogon), Mindoro, Panay, Palawan, Merrill 3345, 9271, Elmer 17397, B. S. 22403 Ramos, 21231 Escritor. In thickets and

open forests at low altitudes. Burma to Indo-China, Malay Peninsula, Sumatra, and Borneo.

UVARIA MUSARIA (Dunal) DC. Mém. Anon. (1832) 29; Merr. Interpret. Herb. Amb. (1917) 225.

Unona musaria Dunal Monogr. Anon. (1817) 100.

Uvaria moluccana Kostel. Allg. Med.-Pharm. Fl. 5 (1836) 1707.

Funis musarius latifolius Rumph. Herb. Amb. 5: 78, t. 42.

Luzon (Camarines), *F. B. 23722 Alvarez*. On forested slopes at low altitudes. Moluccas.

UVARIA NUDISTELLATA Elm. Leaf. Philip. Bot. 5 (1913) 1746.

Palawan, *Elmer 13015*. In dense forests at medium altitudes. Endemic.

UVARIA PANAYENSIS Merr. in Philip. Journ. Sci. 14 (1919) 393.

Panay, *B. S. 31367 Ramos & Edaña*. In forests along small streams at low and medium altitudes. Endemic.

UVARIA PURPUREA Blume Bijdr. (1825) 11 Fl. Jav. Anon. (1828) 13, t. 1, 13A; Miq. Fl. Ind. Bat. 1² (1858) 22; F.-Vill. Novis. App. (1880) 4; Vidal Sinopsis Atlas (1883) 12, t. 4, f. C, Phan. Cuming. Philip. (1885) 92, Rev. Pl. Vasc. Filip. (1886) 39; King in Ann. Bot. Gard. Calcutta 4 (1893) 21, t. 12.

Luzon (Bontoc, Nueva Ecija, Rizal, Cavite), Palawan, *Cuming 1380, Vanoverbergh 3998, B. S. 11475 McGregor, 980 Ramos, 22500 Ramos & Deroy, 917 Foxworthy*. In thickets at low and medium altitudes. Southern China to the Malay Peninsula and Archipelago.

Local names: Banauak (Tag., Bis.); hinlalaki-ságing (Tag.); linas (Bag.); súsong-kalabáu (Tag., Bis.).

UVARIA RUBRA C. B. Rob. in Bull. Torr. Bot. Club 35 (1908) 68, 74.

Uvaria cardinalis Elm. Leaf. Philip. Bot. 5 (1913) 1748.

Central Luzon (Nueva Ecija) to Mindanao and Palawan, numerous collections from thickets and forests at low altitudes; closely allied to *Uvaria purpurea* Blume. Endemic.

Local names: Banauag (P. Bis.); batagkabalang (Bik.); bungálon (Lan.); hankoni (Lan.); klotai (Mbo.); sahing-sáhing (Sul.); tagaki (C. Bis.).

UVARIA RUFA Blume Fl. Jav. Anon. (1828) 19, t. 4; Miq. Fl. Ind. Bat. 1² (1858) 24; Rolfe in Journ. Bot. 23 (1885) 210; Vidal Phan. Cuming. Philip. (1885) 92; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 53, Fl. Manila (1912) 206, Sp. Blancoanae (1918) 147.

Uvaria solanifolia Presl Rel. Haenk. 2 (1835) 76; F.-Vill. Novis. App. (1880) 5.

Unona setigera Blanco Fl. Filip. (1837) 468.

Uvaria setigera Blanco op. cit. ed. 2 (1845) 323, ed. 3, 2 (1878) 234, t. 195.

Uvaria ridleyi King in Journ. As. Soc. Beng. 61² (1892) 19, Ann. Bot. Gard. Calcutta 4 (1893) 23, t. 24B.

Northern Luzon to Palawan and Mindanao. In thickets at low and medium altitudes; endemic. Malay Peninsula, Java.

Local names: Allagát (Ilk.); batag-kabalang (Bik.); hilagak (Tag.); hinlalagák (Tag.); iniu (Sbl.); pedpéd (Ilk.); súsung-damúlag (Pamp.); susung-kabáyo (Tag.); susung-kalabau (Tag.).

UVARIA SCANDENS C. B. Rob. in Bull. Torr. Bot. Club 35 (1908) 69, 74, Philip. Journ. Sci. 6 (1911) Bot. 204.

Luzon (Laguna, Nueva Ecija, Rizal), Polillo, Biliran, Mindanao (Agusan, Davao), *Williams 2764, Elmer 17640, 13273, 14212, Baker 402, Loher 5514, B. S. 9278 Robinson, 10389 McGregor, F. B. 22367 Alvarez, 8905 Curran*. In forests at low and medium altitudes. Endemic.

Local names: Amualung (Mbo.); saging-ságing (Mbo.); súsong-kalabáu (Tag.).

UVARIA SORZOGONENSIS Presl Rel. Haenk. 2 (1835) 76; F.-Vill. Novis. App. (1880) 5; Merr. Sp. Blancoanae (1918) 147.

Unona camphorata Blanco Fl. Filip. (1837) 468, ed. 2 (1845) 326, ed. 3, 2 (1878) 239.

Unona susong calabao Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 434.

Uvaria littoralis C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 204, non Blume.

Uvaria dulcis F.-Vill. Novis. App. (1880) 5; Vidal Cat. Pl. Prov. Manila (1880) 16, non Dunal.

Uvaria ovalifolia Rolfe in Journ. Bot. 23 (1885) 210; Vidal Phan. Cuming. Philip. (1885) 92, Rev. Pl. Vasc. Filip. (1886) 39; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 19, Philip. Journ. Sci. 1 (1906) Suppl. 53, non Blume.

Northern Luzon (Cagayan), to Mindanao and Palawan. In thickets and forests at low and medium altitudes; common. Allied to *Uvaria littoralis* Blume, which Boerlage, Ic. Bogor. 1 (1899) 93, has shown to be identical with *U. ovalifolia* Blume, but an older name. Endemic.

Local names: Alalagát (Ilk.); bagin-tulagak (C. Bis.); balonságing (Tag.); baluganos (P. Bis.); bulagak (Bik.); butoan-pulá (C. Bis.); dalagánun (Bik.); dalagau (Bik.); gilalagal-ságing (Tag.); hinlalagak-ságing (Tag.); imúнау (Ibn.); mamógen (Ibn.); pañgaguason (Bik.); súsong-kalabáu (Tag.); tagibalas (Tag.).

UVARIA STELLATA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 14.

Luzon (Benguet), *Elmer 6322, Merrill 9666*. In thickets, 500 to 1,300 m altitude. Endemic.

UVARIA ZSCHOKKEI Elm. Leaf. Philip. Bot. 1 (1908) 292.

Uvaria subverrucosa Elm. Leaf. Philip. Bot. 5 (1913) 1745.

Luzon (Tayabas, Sorsogon), Mindoro, Biliran, Samar, Mindanao (Agusan, Surigao), *Elmer 7647, 13274, 7307, Wenzel 1826, McGregor 325*. In forests at low and medium altitudes. Endemic.

Local name: Panhopai (Mbo.).

EXCLUDED SPECIES

UVARIA AURITA Blume; F.-Vill. Novis. App. (1880) 5.

UVARIA MACROPODA Hook. f. & Th. F.-Vill. l. c.

UVARIA NARUM Wall.; F.-Vill. l. c.

UVARIA TIMORIENSIS Blume; F.-Vill. l. c.

4. CANANGIUM Baillon

CANANGIUM ODORATUM (Lam.) Baill. ex King in Journ. As. Soc. Beng. 61² (1892) 41, Ann. Bot. Gard. Calcutta 4 (1893) 51, *t.* 62; Koord. & Val. Bijdr. Boomsoort. Java 9 (1903) 279; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 16, Philip. Journ. Sci. 1 (1906) Suppl. 53, Fl. Manila (1912) 208, Sp. Blancoanae (1918) 148.

Uvaria odorata Lam. Encycl. 1 (1785) 595.

Unona odorata Dunal Monog. Anon. (1817) 108.

Cananga odorata Hook. f. & Th. Fl. Ind. 1 (1855) 130; Miq. Fl. Ind. Bat. 1² (1858) 40; F.-Vill. Novis. App. (1880) 5; Vidal Sinopsis Atlas (1883) 12, *t.* 4, *f.* B, Phan. Cuming. Philip. (1885) 92, Rev. Pl. Vasc. Filip. (1886) 40.

Unona odoratissima Blanco Fl. Filip. (1837) 467, ed. 2 (1845) 325, ed. 3, 2 (1878) 239, *t.* 221.

Unona ossea Blanco Fl. Filip. (1837) 467.

Uvaria ossea Blanco op. cit. ed. 2 (1845) 322, ed. 3, 2 (1878) 233.

Throughout the Philippines in cultivation, occurring in some forested areas up to an altitude of 800 m. Indigenous in Burma and Java, planted in most tropical countries.

Local names: Alaṅgigan (Ilk.); alaṅgilang (Tag.); anaṅgilan (C. Bis.); anaṅgiran (Mbo.); aṅgilan (Sub., Sul.); aranigan (Ting.); burak (S. L. Bis.); danipo (Ig.); ilang-ilang (Ilk., If. Tag., Bis.); ṅgiran (Mbo.); taṅgid (Bik.); taṅgit (Bik.).

5. ANAXAGOREA St. Hilaire

ANAXAGOREA LUZONENSIS A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 27; F.-Vill. Novis. App. (1880) 6; Vidal Sinopsis (1883) 12, *t.* 5, *f.* A, Phan. Cuming. Philip. (1885) 92, Rev. Pl. Vasc. Filip. (1886) 41; King in Ann. Bot. Gard. Calcutta 4 (1893) 84, *t.* 118A; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 20, Philip. Journ. Sci. 1 (1906) Suppl. 53, 3 (1908) Bot. 76; Boerl. in Ic. Bogor. 1 (1899) 108, *t.* 31.

Anaxagorea zeylanica Hook. f. & Th. Fl. Ind. 1 (1855) 144; Miq. Fl. Ind. Bat. 1² (1858) 49.

Luzon (Bataan, Laguna, Cavite, Batangas, Camarines), Mindoro, Bili-ran, Leyte, Negros, Mindanao. In forests, chiefly at medium altitudes, locally abundant. Ceylon, Burma, Sumatra, Malay Peninsula, Indo-China, and Java.

Local names: Bagang-áso (Bik.); bobonoyang (C. Bis.); dalaíro (Tag.); káhoi-dalága (Tag.); koles-taláno (Tag.); pauli (P. Bis.); sagaák (Tag.); taláylo (Tag.).

ANAXAGOREA RADIATA C. B. Rob. in Bull. Torr. Bot. Club 35 (1908) 66, 74.

Basilan, Jolo, Williams 3108, B. S. 15484 Reillo, F. B. 18846 Miranda. In forests at low altitudes. Endemic.

6. DESMOS Loureiro

DESMOS COCHINCHINENSIS Lour. Fl. Cochinch. (1790) 352.

Desmos chinensis Lour. l. c.; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 235.

Unona chinensis DC. Syst. 1 (1818) 495, Prodr. 1 (1824) 91; Merr. Fl. Manila (1912) 208.

Unona desmos Raeusch. Nomencl. ed. 3 (1797) 161; Dunal Monogr. Anon. (1817) 112; F.-Vill. Novis. App. (1880) 5.

Unona discolor Vahl Symb. 2 (1791) 63, t. 36; DC. Prodr. 1 (1824) 91; Miq. Fl. Ind. Bat. 1² (1858) 41; F.-Vill. Novis. App. (1880) 5; Vidal Sinopsis Atlas (1883) 12, t. 4, f. A, Rev. Pl. Vasc. Filip. (1886) 41 (var. *pubiflora* Hook. f. & Th.); King in Ann. Bot. Gard. Calcutta 4 (1893) 56, t. 74; Boerl. in Ic. Bogor. 1 (1899) 98; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 20.

Palawan, Basilan, Mindanao (Zamboanga), *Merrill 9279, F. B. 7425 Manalo, 20092 Miranda, B. S. 210 Bermejos, 37234 Ramos & Edaño*. In thickets and forests at low and medium altitudes. India to southern China, southward to Java and Borneo.

I believe, after examining a series of specimens from both Cochinchina and southern China, that Loureiro's two species are the same; in fact, he expresses the opinion that the Chinese form (from Canton) was probably only a variety of the Cochinchinese one.

DESMOS MINDORENSIS (Merr.) comb. nov.

Unona mindorensis Merr. in Philip. Journ. Sci. 2 (1907) Bot. 273.

Desmos elegans Elm. Leaf. Philip. Bot. 8 (1919) 3070.

Luzon (Bataan, Laguna, Rizal, Batangas, Sorsogon), Mindoro, *Merrill 5568, 5656, 4060, Williams 512, B. S. 27862 McGregor, 4572, 13755, 26217, 39775 Ramos, F. B. 25720 Mabesa, 26466 Catalan, Elmer 15884 (Polyalthia irasinensis Elm.), 17649*. In forests at low and medium altitudes, ascending to 1,000 m. Endemic.

DESMOS PALAWANENSIS (Elm.) comb. nov.

Unona palawanensis Elm. Leaf. Philip. Bot. 5 (1913) 1742.

Palawan, *Elmer 13125*. In forests at low altitudes. Endemic.

DESMOS RUBRA (Merr.) comb. nov.

Unona rubra Merr. in Philip. Journ. Sci. 3 (1908) Bot. 224.

Balabac, *B. S. 480 Mangubat*. In forests at low altitudes. Endemic. Local name: Pirañgat (Sul.).

7. POLYALTHIA Blume

POLYALTHIA BARNESII Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 15, Philip. Journ. Sci. 1 (1906) Suppl. 53.

Luzon (Cagayan, Ilocos Sur, Bataan), Mindoro, *F. B. 596 Barnes, 760, 802, 3032 Borden, 9911 Merritt, Whitford 359, Adduru 108*. In forests at low altitudes. Endemic.

Local names: Dalinas-lalaki (Tag.); latauan (Tag.); panaguiaten (Ilk.).

POLYALTHIA DOLICHOPHYLLA Merr. in Philip. Journ. Sci. 14 (1919) 391.

Panay, *B. S. 30983, 30873, Ramos & Edaño, 35428 Martelino & Edaño*. In forests along small streams at low altitudes. Borneo.

POLYALTHIA ELMERI nom. nov.

Unona miniata Elm. Leaf. Philip. Bot. 5 (1913) 1740, non *Polyalthia miniata* Teysm. & Binn.

Palawan, *Elmer* 12718. In thin forests near the seashore. Endemic.

POLYALTHIA ELONGATA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 222.

Mindanao (Zamboanga), *F. B. 9456 Whitford & Hutchinson, 27038 Malana & Alviar*. In forests at low altitudes. Endemic.

POLYALTHIA FLAVA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 12, Philip. Journ. Sci. 1 (1906) Suppl. 53.

Luzon (Rizal, Bataan), *Whitford 1068, F. B. 2052, 2544 Borden, 2514 Meyer, 2135 Ahern's collector*. In forests at low and medium altitudes. Endemic.

Local name: Lanután (Tag.).

POLYALTHIA GIGANTIFOLIA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 246.

Mindanao (Davao, Zamboanga), *F. B. 13763 Foxworthy, De Mesa, & Villamil, 28184 Elumir, B. S. 36966 Ramos & Edaño*. In forests at low altitudes. Endemic.

Local names: Mañgoso (Sub.); tába (Sul.).

POLYALTHIA GLANDULOSA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 247.

Mindanao (Zamboanga), *B. S. 16460 Reillo*. In forests at low altitudes. Endemic.

POLYALTHIA GLAUCA (Hassk.) Boerl. in Ic. Bogor. 1 (1899) 104.

Uvaria glauca Hassk. Cat. Hort. Bogor. (1844) 175, Pl. Jav. Rar. (1848) 172.

Monoon glaucum Miq. in Ann. Mus. Bot. Lugd.-Bat. 2 (1865) 15.

Guatteria glauca Miq. Fl. Ind. Bat. 1² (1858) 49.

Unona merrittii Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 190.

Polyalthia merrittii Merr. in Philip. Journ. Sci. 10 (1915) Bot. 250.

Luzon (Nueva Vizcaya, Tayabas, Camarines), Mindoro, Sibuyan, Dinagat, Mindanao (Butuan), *Whitford 1447, Merrill 1031, Elmer 12449, B. S. 33919 Ramos & Edaño, F. B. 10475 Curran, 3712 Merritt, 24027 Razon, 28532 Cenabre*. In forests at low altitudes. Sumatra and Java to Celebes, New Guinea, and the Key Islands.

Local names: Dogan (P. Bis.); lanután (Tag., Bik.).

POLYALTHIA GRACILIPES Merr. in Philip. Journ. Sci. 10 (1915) Bot. 248.

Luzon (Tayabas), *B. S. 20792, 20825 Escritor, 13177 Foxworthy & Ramos*. In forests at low altitudes. Endemic.

Local name: Pamanútan (Sul.).

POLYALTHIA GRANDIFOLIA Elm. Leaf. Philip. Bot. 1 (1908) 291; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 250.

Polyalthia pinnatinervia Elm. Leaf. Philip. Bot. 5 (1913) 1736.

Polyalthia nickersonii Elm. op. cit. 1733.

Northern Luzon (Cagayan) to Mindanao and Palawan, *Elmer 7358, 12854, 13611, 15467, F. B. 21630 Lopez, 15221 Klemme, 21328 Acuña, 20611 Miranda, B. S. 36681 Ramos & Edaño, 15180, 24566, 24219, 24316 Ramos*,

18879 *McGregor*, *Wenzel* 92, 1652, *Williams* 2344. In forests at low and medium altitudes. Endemic.

Local names: Bañgár (Neg.); labnisan (S. L. Bis.); lanután (P. Bis.); lanután-nga-puyá (P. Bis.); magataru (Lan.); mángso (Ibn.); múnat (Ibn.); ngarau (S. L. Bis.); panantólan (Ilk.); taganing (Mbo.).

POLYALTHIA KLEMMEI Elm. Leaf. Philip. Bot. 5 (1913) 1735.

Sibuyan, Palawan, *Elmer* 12565, 12644. In forests at low altitudes; a species very closely allied to and possibly not distinct from *Polyalthia grandifolia* Elm., differing chiefly in its more-numerous lateral nerves. Endemic.

Local name: Alisnat (Tagb.).

POLYALTHIA LUCIDA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 249.

Luzon (Tayabas), Alabat, Samar, Mindanao (Zamboanga), *B. S.* 13338, 19416, 24416 *Ramos*, *F. B.* 9008, 9400 *Whitford & Hutchinson*, *Merrill* 10497. In forests at low altitudes. Endemic.

Local name: Malangkalipáyan (S. L. Bis.).

POLYALTHIA MINDANAENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1734.

Mindanao (Davao, Cotabato, Lanao, Zamboanga), *Elmer* 11642, *F. B.* 23371 *Ponce*, 25267 *Alvarez*, 26657 *Rola*, 9112 *Whitford & Hutchinson*. In forests at low and medium altitudes, ascending to 1,200 m.

Local names: Dulau (Lan.); hindang (C. Bis.); pугan (Bag.).

POLYALTHIA MINDORENSIS nom. nov.

Phaeanthus acuminatus Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 11, Philip. Journ. Sci. 2 (1907) Bot. 273, non *Polyalthia acuminata* Thw.

Mindoro, *Merrill* 4050, *F. B.* 4321, 6154, 6887, 11383 *Merritt*. In forests at low altitudes. Endemic.

POLYALTHIA OBLIQUA Hook. f. & Th. Fl. Ind. 1 (1855) 138; F.-Vill. Novis. App. (1880) 6; King in Ann. Bot. Gard. Calcutta 4 (1893) 77, t. 100 B.

Polyalthia similis Merr. in Philip. Journ. Sci. 8 (1913) Bot. 371.

Polyalthia pulgarensis Elm. Leaf. Philip. Bot. 5 (1913) 1731.

Polyalthia minutiflora Elm. op. cit. 1730.

Palawan, Samar, Leyte, Mindanao, *B. S.* 780 *Foxworthy*, 204 *Bermejos*, 15185 *Ramos*, *F. B.* 36767 *Ramos & Edaño*, 26601 *Ceballos*, 23375 *Acuña*, *Elmer* 13055, 13621, 13100, *Wenzel* 91, 1846. In forests at low and medium altitudes, ascending to 450 m. Chittagong, Malay Peninsula, Sumatra, Celebes (*Koorders* 15995 det. as *Polyalthia celebica* Miq.).

Local names: Balogo (Mbo.); banalutan (Lan.); kalai (Lan.); lalañgoi (Sub.).

POLYALTHIA OBLONGIFOLIA C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 202.

Luzon (Nueva Vizcaya, Tayabas, Camarines), Polillo, Samar, Leyte, Negros, Mindanao, Basilan, *B. S.* 9259 *Robinson*, 24446 *Ramos*, *Sablaza* 101, *F. B.* 12752 *Rosenbluth*, 17473 *Curran*, 20083 *Miranda*, 28212 *Elumir*. In forests at low and medium altitudes. Endemic.

Local names: Lanután (Bik., P. Bis., Tag.); lapnisan (P. Bis.).

POLYALTHIA PALAWANENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 246.

Palawan, Merrill 9469. On dry forested slopes at low altitudes. Endemic.

POLYALTHIA RAMIFLORA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 244.

Luzon (Cagayan, Laguna, Sorsogon), Samar, *F. B. 5160 Bridges, 20472 Barros, B. S. 21984 Ramos, Merrill Phil. Pl. 1660*. In forests at low and medium altitudes; closely allied to *Polyalthia zamboangensis* Merr. Endemic.

Local names: Lanután (Tag., Bik.); lasubán (Ilk.).

POLYALTHIA RUMPHII (Blume) comb. nov.

Guatteria rumphii Blume ex Henschel Vita Rumph. (1833) 153.

Arbor nigra parvifolia Rumph. Herb. Amb. 5: 10, t. 4, f. 2; t. 5.

Guatteria jenkinsii Hook. f. & Th. Fl. Ind. 1 (1855) 141, quoad spec. Malacca.

Polyalthia jenkinsii King in Journ. As. Soc. Beng. 61² (1892) 56, Ann. Bot. Gard. Calcutta 4 (1893) 70, t. 96.

Guatteria canangioides Reichb. f. & Zoll. ex Miq. Fl. Ind. Bat. Suppl. (1860-61) 378.

Monoon canangioides Miq. in Ann. Mus. Bot. Lugd.-Bat. 2 (1865) 18.

Polyalthia canangioides Boerl. in Ic. Bogor. 1 (1899) 105.

Guatteria parveana Miq. Fl. Ind. Bat. 1² (1858) 48.

Polyalthia cumingiana Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 71.

Unona agusanensis Elm. Leaflet. Philip. Bot. 5 (1913) 1743.

Polyalthia agusanensis Merr. in Philip. Journ. Sci. 10 (1915) Bot. 250.

Luzon (Tayabas, Laguna, Camarines), Masbate, Samar, Leyte, Mindanao, *Cuming 827, Wenzel 798, Elmer 13654, F. B. 24870, 25376 Mabesa, 20164 Aguilar, 23704, 24633 Alvarez, B. S. 24233 Ramos, Merrill Phil. Pl. 1537*. In forests at low and medium altitudes. Malay Peninsula, Sumatra, Borneo, Java, Celebes, and the Moluccas.

Local names: Lanután (Tag.); lanután-lain (S. L. Bis.).

POLYALTHIA SUBEROSA (Roxb.) Thwaites Enum. Pl. Zeyl. (1864) 398;

Hook. f. Fl. Brit Ind. 1 (1872) 65; F.-Vill. Novis. App. (1880) 6; Vidal Phan. Cuming. Philip. (1885) 92, Rev. Pl. Vasc. Filip.

(1886) 41; Boerl. in Ic. Bogor. 1 (1899) 145, t. 50; King in Ann. Bot. Gard. Calcutta 4 (1893) 64, t. 77 B; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 54, Fl. Manila (1912) 209.

Uvaria suberosa Roxb. Pl. Coromandel 1 (1795) t. 34.

Phaeanthus cumingii Vidal Sinopsis Atlas (1883) 12, t. 5, f. D, non Miq.

Luzon (Cagayan to Laguna), Mindanao (Cotabato). Rather common in thickets at low and medium altitudes. India to southern China and Malaya.

Local names: Baling-manók (Tag.); duhat-duhátan (Tag.); dúhat-matsíng (Tag.); dúyat-nasi (Pamp.); lanután (Tag.); tagputagpúan (Tag.).

POLYALTHIA VENOSA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 222.

Mindanao (Zamboanga, Misamis), *F. B. 9108, 9232 Whitford & Hutchinson, 17975 Miranda, 13277 Foxworthy, De Mesa, & Villamil, B. S. 11790 Robinson, 36558, 36769, 37332 Ramos & Edaño*. In forests at low altitudes. Endemic.

Local name: Subangsúbang (Sul.).

POLYALTHIA WILLIAMSII C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 181.

Mindanao (Zamboanga), *Williams 2306, F. B. 9279 Whitford & Hutchinson, B. S. 37440, 36574 Ramos & Edaño*. In dipterocarp forests at low altitudes. Endemic.

POLYALTHIA ZAMBOANGENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 245.

Mindanao (Zamboanga), *F. B. 13276 Foxworthy, De Mesa, & Villamil*. In forests at low altitudes. Endemic.

Local name: Malakáyang-lupo (Sul.).

DOUBTFUL SPECIES

POLYALTHIA sp.; Merr. Sp. Blancoanae (1918) 148.

Unona cabog Blanco Fl. Filip. (1837) 466.

Unona odorata Blanco op. cit. ed. 2 (1845) 325, ed. 3, 2 (1878) 237, non Dunal.

Blanco's species cannot be determined with certainty beyond the genus from his imperfect description.

8. PAPUALTHIA Diels

PAPUALTHIA HETEROPETALA Merr. in Philip. Journ. Sci. 14 (1919) 389.

Luzon (Ilocos Norte), *B. S. 32853 Ramos*. In dry forests at low altitudes. Endemic.

PAPUALTHIA LANCEOLATA (Vidal) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 242.

Polyalthia lanceolata Vidal Phan. Cuming. Philip. (1885) 170, Rev. Pl. Vasc. Filip. (1886) 41.

Papualthia bakeri Elm. Leaf. Philip. Bot. 8 (1919) 3070.

Luzon (Cagayan, Ilocos Norte, Nueva Ecija, Laguna, Batangas, Sorogon), *Cuming 450, B. S. 33052, 24062 Ramos, Baker 603, 5986, Elmer 15166, 16045, 17775, 18327*. In forests at low and medium altitudes. Endemic.

Local name: Anólang (Tag.).

PAPUALTHIA LOHERI (Merr.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 242.

Polyalthia loheri Merr. in Philip. Journ. Sci. 7 (1912) Bot. 268.

Polyalthia romblonensis Elm. Leaf. Philip. Bot. 5 (1913) 1729.

Luzon (Cagayan, Isabela, Rizal, Nueva Ecija, Tayabas, Rizal, Sorogon), Alabat, Romblon, *Cuming 1846, F. B. 14780 Darling, 18437 Alvarez, 6641 Klemme, 26071 Barros, Loher 5531, B. S. 26438, 26364, 29399 Ramos & Edaño, Merrill 10457, Elmer 12170*. Endemic.

Local names: Gibal (Tag.); lanután (Tag.); oasóasan (Klg.); puñga-naoan (Ibn.).

PAPUALTHIA RETICULATA (Elm.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 242.

Polyalthia reticulata Elm. Leaflet. Philip. Bot. 1 (1908) 292.

Polyalthia loheri Merr. var. *cagayanensis* Merr. in Philip. Journ. Sci. 7 (1912) Bot. 269.

Luzon (Cagayan, Isabela, Apayao), Samar, Leyte, *Elmer 7272, Wenzel 1777, B. S. 7999, 17417, 24398 Ramos, 28413 Fénix*. In forests at low and medium altitudes. Endemic.

Local name: Maladilang-bogsog (S. L. Bis.).

PAPUALTHIA SAMARENSIS Merr. in Philip. Journ. Sci. 11 (1916) Bot. 180.

Samar, *B. S. 24180 Ramos*. In damp forests at low altitudes. Endemic.

PAPUALTHIA SYMPETALA (C. B. Rob.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 242.

Unona sympetala C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 203.

Luzon (Laguna, Tayabas), Polillo, *B. S. 10352 McGregor, 20515 Ramos*. In forests at low and medium altitudes. Endemic.

PAPUALTHIA TENUIPES (Merr.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 243.

Polyalthia tenuipes Merr. in Philip. Journ. Sci. 7 (1912) Bot. 269.

Luzon (Tayabas), *B. S. 13472 Foxworthy & Ramos*. In forests at low altitudes. Endemic.

PAPUALTHIA URDANETENSIS (Elm.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 243.

Polyalthia urdanetensis Elm. Leaflet. Philip. Bot. 5 (1913) 1738.

Mindanao (Agusan), *Elmer 18931*. In forests, altitude about 1,050 m. Endemic.

Local name: Kaiti-iti (Mbo.).

The genus is otherwise known only from New Guinea.

9. POPOWIA Endlicher

POPOWIA LANCEOLATA Merr. in Philip. Journ. Sci. 17 (1920) 252.

Dinagat, *B. S. 35186 Ramos & Pascasio*. In forests at low altitudes. Endemic.

POPOWIA PISOCARPA (Blume) Endl. in Walp. Repert. 1 (1842) 74; Koord. & Val. in Meded. Lands Plantent. 61 (1903) 339.

Guatteria pisocarpa Blume Bijdr. (1825) 21.

Bocagea pisocarpa Blume Fl. Jav. Anon. (1828) 90, t. 45.

Guatteria ramosissima Wall. Cat. (1832-47) No. 7294, 8006, *nomen nudum*.

Popowia ramosissima Hook. f. & Th. Fl. Ind. 1 (1855) 105; King in Ann. Bot. Gard. Calcutta 4 (1893) 117, t. 159B.

Bocagea polyandra Presl Rel. Haenk. 2 (1835) 77.

Popowia polyandra Merr. in Philip. Journ. Sci. 3 (1908) Bot. 224.

Luzon (Camarines, Sorsogon), Polillo, Samar, Leyte, Negros, Panay, Mindanao), *Presl, B. S. 22100, 23377, 17506, 24164 Ramos, 15683 Fénix*,

33593, 33749 *Ramos & Edaño*, *Merrill Phil. Pl.* 1530, 1169, *Wenzel* 1164, 371, *Williams* 2315, *Elmer* 13544, 14035, *Clemens* 1007, *F. B.* 17485, 17489 *Curran*. In forests at low and medium altitudes. Malay Peninsula, Sumatra, Java, and Borneo.

Local names: Bulanutan (Buk.); deyending (S. L. Bis.); palang-palang (Mbo.).

10. ALPHONSEA Hooker f. and Thomson

ALPHONSEA ARBOREA (Blanco) Merr. in *Philip. Journ. Sci.* 10 (1915) Bot. 233, Sp. Blancoanae (1918) 146.

Macanea arborea Blanco Fl. Filip. (1837) 431.

Monodora myristica Blanco op. cit. ed. 2 (1845) 300, ed. 3, 2 (1878) 193, non Dunal.

Monocarpia blanchoi F.-Vill. Novis. App. (1880) 6.

Alphonsea philippinensis Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 9.

Luzon (Laguna, Rizal, Tayabas, Camarines), Mindoro, Masbate, Ticao, Leyte, Cebu, Mindanao, *F. B.* 20288, 22020 *Villamil*, 10499 *Curran*, 12710, 12729 *Rosenbluth*, 1015 *Clark*, 6439 *Espinosa*, *Merrill* 1075, 2062, 2591, 1925, 1988, Sp. Blancoanae 838. In forests at low and medium altitudes. Endemic.

Local names: Bolon (Bik.); kálai (Tag.); lanotán (S. L. Bis.); lanután (Tag., Bik.); malatambón (Bik.); palo-kálai (Tag.); sapiro (C. Bis.).

ALPHONSEA SESSILIFLORA Merr. in *Philip. Journ. Sci.* 10 (1915) Bot. 233.

Luzon (Rizal, Nueva Ecija), *F. B.* 22118 *Alvarez*, *B. S.* 13617 *Ramos*. In forests at low and medium altitudes. Endemic.

11. SACCOPETALUM Bennett

SACCOPETALUM ARBOREUM Elm. Leaf. Philip. Bot. 5 (1913) 1739.

Palawan, *Elmer* 12677. In forests at low altitudes. Endemic.

Local name: Ubaran (Tagb.).

SACCOPETALUM LONGIPES Vidal Rev. Pl. Vasc. Filip. (1886) 43; *Ceron* Cat. Pl. Herb. Manila (1892) 12.

Luzon (Ilocos Norte, Ilocos Sur, Zambales, Laguna, Bataan, Rizal, Cavite), *Cuming* 1198, *Merrill* 1728, 2965, *F. B.* 7105 *Klemme*, 20293, 20987 *Villamil*, 23854, 25475, 13254 *Paraíso*. In dry forests at low and medium altitudes. Endemic.

Local names: Dangluk (Tag.); lanután (Tag.); takúlau (Ilk.); takú-lau-puráu (Ilk.).

12. PHAEANTHUS Hooker f. and Thomson

PHAEANTHUS EBRACTEOLATUS (Presl) Merr. in *Philip. Journ. Sci.* 3 (1908) Bot. 225, 406, Sp. Blancoanae (1918) 148.

Uvaria ebracteolata Presl Rel. Haenk. 2 (1835) 77; F.-Vill. Novis. App. (1880) 5.

Uvaria tripetala Blanco Fl. Filip. (1837) 465, non Roxb.

Unona tripetala Blanco op. cit. ed. 2 (1845) 324, ed. 3, 2 (1878) 236.

Phaeanthus cumingii Miq. Fl. Ind. Bat. 1² (1858) 51; *Vidal Phan.* *Cuming*. Philip. (1885) 93, Rev. Pl. Vasc. Filip. (1886) 42; Merr. in *Philip. Bureau Forest. Bull.* 1 (1903) 20, Govt. Lab. Publ.

(Philip.) 27 (1905) 16, Philip. Journ. Sci. 1 (1906) Suppl. 54, 2 (1907) Bot. 273.

Phaeanthus nutans F.-Vill. Novis. App. (1880) 6, non Hook. f. & Th.

Babuyan Islands and northern Luzon to Mindanao. Common in forests at low and medium altitudes. Endemic.

Local names: Alataúan (Tag.); banátan (Tag.); banítan (Tag.); bat-nítang (Tag.); dalinas (Tag.); kalimatás (Tag.); kalumatás (Tag.); katinatáu (Tag.); langlañgás (Ilk.); lanotán (Tag.); lanótang-itím (Tag.); lanután (Tag.); marasiğiát (Gad.); oyoí (Tag.); purópúgai (Neg.); takúlau (Ilk.); yamban (Sbl.).

PHAEANTHUS NIGRESCENS Elm. Leaf. Philip. Bot. 5 (1913) 1728.

Phaeanthus nitidus Merr. in Philip. Journ. Sci. 11 (1916) Bot. 8.

Luzon (Camarines, Sorsogon), Samar, Mindanao, *Elmer* 13727, 15168 (*P. vinosus* Elm.), *B. S.* 23477, 22092, 24169 *Ramos*, 33891, 33590, 33550 *Ramos & Edaño*, *F. B.* 26100 *Oliveros*. In forests, ascending to 1,050 m. Endemic.

Local names: Dagaua (Mbo.); titis (Bik.).

PHAEANTHUS PUBESCENS Merr. in Philip. Journ. Sci. 14 (1919) 390.

Luzon (Cagayan, Isabela, Ilocos Norte, Nueva Vizcaya), *B. S.* 27333, 32815 *Ramos*, *F. B.* 23272 *Velasco*, 24091 *Barros*, 14850, 14695 *Darling*, 25099, 22092 *Paraíso*, 28525 *Cenabre*. In forests at low and medium altitudes. Endemic.

Local names: Langlañgés (Ilk.); takúlau (Ilk.); tuklang (Klg.).

PHAEANTHUS VILLOSUS Merr. in Philip. Journ. Sci. 14 (1919) 391.

Panay, *B. S.* 30775 *Ramos & Edaño*, 35469 *Martelino & Edaño*. In damp forests along small streams at low and medium altitudes. Endemic.

EXCLUDED SPECIES

PHAEANTHUS MALABARICUS Bedd.; F.-Vill. Novis. App. (1880) 7.

13. OROPHEA Blume

OROPHEA AVERSA (Elm.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 10.

Mitrephora avera Elm. Leaf. Philip. Bot. 5 (1913) 1719.

Luzon (Sorsogon), Mindanao (Agusan), *Elmer* 13985, 16208, 15197, *F. B.* 24434 *Miras*. In forests up to 400 m altitude; closely allied to *Orophea cumingiana* Vid. Endemic.

Local names: Kondi (Mbo.); pamohogan (Mbo.).

OROPHEA BRACTEOLATA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 223.

Luzon (Cagayan, Ilocos Norte), *F. B.* 7055 *Klemme*, 13107 *Bernardo*, *B. S.* 27471 *Ramos*. In forests at low altitudes. Endemic.

Local name: Pañganáuin (Ibn.).

OROPHEA CUMINGIANA Vidal Phan. Cuming. Philip. (1885) 93, 170, Rev. Pl. Vasc. Filip. (1886) 44; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 54.

Orophea erythrocalyx Vidal Sinopsis Atlas (1883) 12, t. 5, f. G; F.-Vill. Novis. App. (1883) 347, non Bedd.

Luzon (Cagayan, Nueva Vizcaya, Nueva Ecija, Rizal, Bataan, Laguna, Tayabas, Sorsogon, Camarines, Albay), Mindoro, Samar, Leyte, Mindanao,

Cuming 854, 1412, 1705, 1741, *Merrill Phil. Pl.* 1545, *Elmer* 16688, 10498, 17601, *F. B.* 10309 *Curran, Loher* 5528, 5527, 5519. In forests at low and medium altitudes. Endemic.

Local names: Amúnat (Ibn.); karasákat (Is.); lanután (Tag.); lo-banti (Bag.); poagan (Bag.).

OROPHEA ELLIPANTHOIDES (Elm.) comb. nov.

Mitrephora ellipanthoides Elm. *Leaf. Philip. Bot.* 5 (1913) 1715.

Orophea unguiculata Elm. *op. cit.* 5 (1913) 1724.

Samar, Mindanao (Agusan), Zamboanga, *Elmer* 13987, 13286, *Merrill Phil. Pl.* 1661, *B. S.* 36636 *Ramos & Edaño*. In forests at low and medium altitudes. Endemic.

Local names: Pagaion (Mbo.); papaon (Mbo.); tulang-manók (Sub.).

OROPHEA ENTEROCARPOIDEA Vidal Phan. *Cuming. Philip.* (1885) 93, 171, *Rev. Pl. Vasc. Filip.* (1886) 44.

Orophea enterocarpa F.-Vill. *Novis. App.* (1883) 347, non Maingay.

Luzon (Tayabas), Mindoro, Palawan, *Cuming* 1586, *B. S.* 19443 *Ramos, F. B.* 6797 *Merritt, Merrill* 4037, 1815, 9212, *McGregor* 185, *Whitford* 1456. In forests at low altitudes. Endemic.

Local name: Makitarin (Tag.).

OROPHEA GLABRA Merr. in *Govt. Lab. Publ. (Philip.)* 29 (1905) 14, 35 (1906) 71.

Luzon (Cagayan, Apayao, Ilocos Norte, Nueva Ecija, Tayabas, Sorsogon), Ticao, Samar, *Cuming* 1277, *Merrill* 3996, *Phil. Pl.* 1672, *Elmer* 16690, *B. S.* 33172 *Ramos, 28249 Félix, 26377 Ramos & Edaño*. In forests at low altitudes. Endemic.

Local names: Batúno (Neg.); lanután (Bik.).

OROPHEA LEYTENSIS Merr. in *Philip. Journ. Sci.* 11 (1916) Bot. 181.

Luzon (Tayabas, east coast), Samar, Leyte, *Wenzel* 1711, 1723, *B. S.* 24292, 24468 *Ramos, 28802 Ramos & Edaño*. In forests at low altitudes. Endemic.

OROPHEA LUZONENSIS Merr. in *Philip. Journ. Sci.* 3 (1908) Bot. 224.

Orophea maculata Merr. in *Govt. Lab. Publ. (Philip.)* 35 (1906) 11, *Philip. Journ. Sci.* 1 (1906) Suppl. 54, non Scort.

Luzon (Bataan, Tayabas), *F. B.* 25305 *Bawan, 2389 Borden, 2418 Meyer, Ahern* 745, *Williams* 510, 735. In forests at low and medium altitudes. Endemic.

OROPHEA PALAWANENSIS Elm. *Leaf. Philip. Bot.* 5 (1913) 1721.

Palawan, *Elmer* 12858, 12645, *Merrill* 9227. In forests at low and medium altitudes. Endemic.

Local name: Tabinṅgalang (Tagb.).

OROPHEA POLYANTHA Merr. in *Philip. Journ. Sci.* 10 (1915) Bot. 257.

Samar, *B. S.* 24166 *Ramos, Merrill Phil. Pl.* 1673. In forests at low altitudes. Endemic.

OROPHEA SUBMACULATA Elm. *Leaf. Philip. Bot.* 5 (1913) 1723.

Palawan, *Elmer* 13018, 13099. In forests, altitude 200 to 450 m. Endemic.

OROPHEA TARROSAE Merr. in Philip. Journ. Sci. 10 (1915) Bot. 258.
Mindanao (Cotabato), *F. B. 14927 Tarrosa & Almagro*. In forests at low altitudes. Endemic.

Local name: Lanután (Sul.).

OROPHEA WENZELII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 356.

Leyte, Samar, *B. S. 24225 Ramos, Wenzel 682*. In forests, altitude up to 500 m. Endemic.

OROPHEA WILLIAMSII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 259.

Mindanao (Zamboanga), *Williams 2311, F. B. 25341 Franco, 25331 Ceballos & Tecson*. In forests at low altitudes. Endemic.

14. PSEUDUVARIA Miquel

PSEUDUVARIA CAUDATA Merr. in Philip. Journ. Sci. 17 (1920) 251.

Luzon (Camarines), *F. B. 25533 Cenabre*. In primary forests at low altitudes. Endemic.

PSEUDUVARIA GRANDIFLORA Merr. in Philip. Journ. Sci. 14 (1919) 392.

Luzon (Ilocos Norte), *B. S. 27514 Ramos*. In forests at low altitudes. Endemic.

Local name: Apnít (Ilk.).

PSEUDUVARIA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 256.

Luzon (Cagayan, Tayabas), Palawan, Samar, *Merrill 9213, Sablaya 51, B. S. 24449 Ramos, F. B. 12987 Bernardo, 20182 Aguilar*. In forests at low and medium altitudes. Endemic.

Local names: Dangloi (S. L. Bis.); lanután (Tag.).

15. MITREPHORA Hooker f. and Thomson

MITREPHORA BASILANENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 251.

Basilan, *F. B. 20060 Miranda*. In forests near mangrove swamps. Endemic.

MITREPHORA CAGAYANENSIS Merr. in Philip. Journ. Sci. 14 (1919) 387.

Luzon (Cagayan), *B. S. 22733 Castillo, Adduru 143*. In thickets and forests at low altitudes. Endemic.

MITREPHORA FRAGRANS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 252.

Palawan, *Merrill 9217, F. B. 25755 Natividad*. In forests at low altitudes. Endemic.

MITREPHORA LANOTAN (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 71, Philip. Journ. Sci. 1 (1906) Suppl. 54, 2 (1907) Bot. 430, Sp. Blancoanae (1918) 149.

Uvaria lanotan Blanco Fl. Filip. (1837) 464.

Unona latifolia Blanco op. cit. ed. 2 (1845) 324, ed. 3, 2 (1878) 236, non Dunal.

Luzon (Apayao, Ilocos Norte, Ilocos Sur, Pangasinan, Nueva Ecija, Zambales, Bulacan, Rizal, Bataan, Laguna, Tayabas), Polillo, Mindoro, Palawan. In dry forests at low and medium altitudes. Endemic.

Local names: Banítan (Tag.); dalínas (Tag.); dalinas-laláki (Tag.); daliñgas (Tag.); lanotán (Tag.); malausá (Sbl.); pagiñgá (Ibn.); pañgananan (Neg.).

MITREPHORA PICTIFLORA Elm. Leaf. Philip. Bot. 5 (1913) 1718.

Mindanao (Agusan), *Elmer 13731*. In forests, altitude about 750 m. Endemic.

Local name: Babayokan (Mbo.).

MITREPHORA REFLEXA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 10.

Luzon (Cagayan, Rizal, Tayabas), Mindoro, Samar, *F. B. 2882 Ahern's collector, 24256 Bernardo, B. S. 28847 Ramos & Edaña, Adduru 63, 96, Loher 5517, Merrill Phil. Pl. 1674*. In forests at low and medium altitudes. Endemic.

Local names: Lanotán (Tag.); pañganánan (Neg.).

MITREPHORA SAMARENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 253.

Samar, Biliran, *Merrill Phil. Pl. 1666, B. S. 18550 McGregor*. In forests, altitude about 300 m. Endemic.

MITREPHORA WEBERI Merr. in Philip. Journ. Sci. 7 (1912) Bot. 266.

Busuanga, *Weber 1550*. In forests at low altitudes. Endemic.

MITREPHORA WILLIAMSII C. B. Rob. in Bull. Torr. Bot. Club 35 (1908) 68, 74.

Mindanao (Zamboanga), *Williams 2188, F. B. 13783 Foxworthy, De Mesa, & Villamil*. In forests at low altitudes.

EXCLUDED SPECIES

MITREPHORA RETICULATA Hook. f.; F.-Vill. Novis. App. (1883) 347.

16. GONIOTHALAMUS Hooker f. and Thomson

GONIOTHALAMUS AMUYON (Blanco) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 264, Sp. Blancoanae (1918) 149.

Uvaria amuyon Blanco Fl. Filip. (1837) 463.

Unona cauliflora Blanco op. cit. ed. 2 (1845) 323, ed. 3, 2 (1878) 235.

Luzon (Abra, Ilocos Norte, Ilocos Sur, Pangasinan, Batangas, Rizal, Tayabas), Negros, Bohol, Mindanao, *F. B. 23387 Contreras, 26331 Paraíso, 25871 Adduru, 5642 Klemme, B. S. 1229 McGregor, 32705 Ramos, 17898 Otanes, 26715 Félix, Merrill Sp. Blancoanae 603, Lete 247*. In forests at low and medium altitudes. Endemic.

Local names: Amúyon (C. Bis.); amúyong (Tag.); bantana (Buk.); grano del paraíso (Sp.); sagiát (Ilk.).

GONIOTHALAMUS COPELANDII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 262.

Mindanao (Zamboanga), *Merrill 8297*. In hill forests, altitude about 900 m. Endemic.

GONIOTHALAMUS DOLICHOPETALUS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 221.

Mindanao (Zamboanga, Misamis, Lanao), Basilan, *B. S.* 37073, 37412 *Ramos & Edaño*, *F. B.* 24691 *Tecson*, 9268, 9261 *Whitford & Hutchinson*, 23314 *Agama*, 22457 *Klemme*, *Williams* 2327, 2328. In forests at low and medium altitudes. Endemic.

Local names: Kusa (Sub.); saliangka (Sub.).

GONIOTHALAMUS ELMERI Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 13, 35 (1906) 71, Philip. Journ. Sci. 1 (1906) Suppl. 54, 2 (1907) Bot. 273, 3 (1908) Bot. 76.

Goniothalamus giganteus Vidal Sinopsis Atlas (1883) 12, t. 5, f. B, Phan. Cuming. Philip. (1885) 93, p. p., Rev. Pl. Vasc. Filip. (1886) 42, p. p., non Hook. f. & Th.

Goniothalamus brunneus Merr. in Philip. Journ. Sci. 11 (1916) Bot. 9.

Northern Luzon to Mindanao. A common, rather variable, widely distributed species in forests at low and medium altitudes. Endemic.

Local names: Bigus (Neg.); lanútan (P. Bis., Mbo.); malaámyong (Sbl.); malapa (C. Bis.); marabútai (Neg.).

GONIOTHALAMUS EPIPHYTICUS Elm. Leaf. Philip. Bot. 5 (1913) 1711.

Mindanao (Agusan), *Elmer* 13535, 13830. On forested ridges (terrestrial), and in the mossy forest (pseudoepiphytic), altitude 900 to 1,500 m. A species of uncertain status of which the flowers are unknown; perhaps not distinct from *G. elmeri* Merr. Endemic.

Local names: Ginañgiuan (Mbo.); lanútan (Mbo.).

GONIOTHALAMUS GITINGENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1710.

Mindanao (Zamboanga), Sibuyan, *Elmer* 12507, *B. S.* 36593 *Ramos & Edaño*. On forested ridges, altitude about 1,350 m; very closely allied to *G. elmeri* Merr. Endemic.

Local name: Guyog (Sub.).

GONIOTHALAMUS GIGANTIFOLIUS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 263.

Basilan, *F. B.* 18958 *Miranda*. In forests, altitude about 160 m; flowers unknown. Endemic.

GONIOTHALAMUS LANCIFOLIUS Merr. in Philip. Journ. Sci. 14 (1919) 385.

Luzon (Cagayan, Pangasinan), *B. S.* 29992 *Fénix*, *F. B.* 24844 *Barros*. In forests at low and medium altitudes. Endemic.

Local name: Monát (Ilk.).

GONIOTHALAMUS LONGISTYLUS Merr. in Philip. Journ. Sci. 14 (1919) 386.

Luzon (Tayabas, east coast), *B. S.* 26639 *Ramos & Edaño*. In forests at low and medium altitudes. Endemic.

GONIOTHALAMUS OBTUSIFOLIUS Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 9.

Mindoro, Palawan, Mindanao (Agusan), *Merrill* 2183, 9215, *F. B.* 4139 *Curran*, *B. S.* 41201 *Ramos*. In dry forests at low altitudes. Endemic.

Local name: Amúyon (Tag.).

GONIOTHALAMUS PANAYENSIS Merr. in Philip. Journ. Sci. 17 (1920) 251.

Panay, *B. S.* 35290, 35575 Martelino & Edaño. In forests at low or medium altitudes. Endemic.

GONIOTHALAMUS PHILIPPINENSIS Merr. in Philip. Journ. Sci. 3 (July, 1908) Bot. 135.

Goniothalamus giganteus F.-Vill. Novis. App. (1880) 6; Vidal Phan. Cuming. Philip. (1885) 93, Rev. Pl. Vasc. Filip. (1886) 42, non Hook. f. & Th.

Goniothalamus magnificus Elm. Leaf. Philip. Bot. 2 (Dec. 14, 1908) 473.

Goniothalamus mindanaensis Elm. Leaf. Philip. Bot. 5 (1913) 1712.

Luzon (Tayabas), Samar, Biliran, Mindanao (Agusan, Bukidnon, Lanao, Davao), *Cuming* 1746, *Elmer* 7419, 10982, 14024 *Clemens* 1049, *B. S.* 24286 *Ramos*, 18783 *McGregor*, 21458 *Escritor*, 15758 *Fénix*, *F. B.* 23184 *Agama*, *Merrill Phil. Pl.* 1639. In forests at low and medium altitudes. Endemic.

Local names: Dakter (Buk.); lanután (S. L. Bis., Mbo.); latipo (Lan.).

GONIOTHALAMUS PUNCTICULIFOLIUS Merr. in Philip. Journ. Sci. 20 (1922) 383.

Mindoro, *B. S.* 39660, 39519, 39676 *Ramos*. In dry forests at low altitudes. Endemic.

GONIOTHALAMUS SIBUYANENSIS (Elm.) comb. nov.

Uvaria sibuyanensis Elm. Leaf. Philip. Bot. 5 (1913) 1747; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 230.

Sibuyan, *Elmer* 12322. In forests, altitude about 300 m. A species of uncertain status, apparently allied to *G. elmeri* Merr., but the flowers unknown. Endemic.

Local name: Lanítos (P. Bis.).

GONIOTHALAMUS TRUNCIFLORUS Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 10.

Luzon (Tayabas, east coast), *Whitford* 774, *B. S.* 25497 *Yates*. In forests at low altitudes. Endemic.

EXCLUDED SPECIES

GONIOTHALAMUS FULVUS Hook. f. & Th.; F.-Vill. Novis. App. (1880) 6.

GONIOTHALAMUS MALAYANUS Hook. f. & Th.; King in Ann. Bot. Gard. Calcutta 4 (1893) 94.

King extends the range of this Malayan species to the Philippines, but I have seen no specimens that I would refer here.

17. XYLOPIA Linnaeus

XYLOPIA DEHISCENS (Blanco) Merr. in Philip. Bureau Forest. Bull. 1 (1903) 20, Govt. Lab. Publ. (Philip.) 27 (1905) 16, Philip. Journ. Sci. 1 (1906) Suppl. 54, Sp. Blancoanae (1918) 149.

Unona dehiscens Blanco Fl. Filip. (1837) 466, ed. 2 (1845) 325, ed. 3, 2 (1878) 238.

Xylopija blancoi Vidal Sinopsis Atlas (1883) 12, t. 5, f. C, Rev. Pl. Vasc. Filip. (1886) 43.

Northern Luzon (Cagayan) to Mindanao, *Merrill 1926, 1946, B. S. 29097 Ramos & Edaña, F. B. 683 Borden, 11696 Whitford, 4064, 9697 Merritt, 985, 998 Clark*. In forests at low and medium altitudes. Endemic.

Local names: Banitan (Ilk.); damarau (P. Bis.); hagibat (Neg.); sudkad (P. Bis., Bik.); tangísang-bágio (Tag.).

XYLOPIA DENSIFOLIA Elm. Leaf. Philip. Bot. 5 (1913) 1749.

Luzon (Tayabas, east coast), Mindoro, Sibuyan, *Elmer 12471, Merrill 1011, B. S. 21198 Escritor, 39754 Ramos*. In forests at low and medium altitudes. Endemic.

18. MEIOGYNE Miquel

MEIOGYNE LUCIDA Elm. Leaf. Philip. Bot. 5 (1913) 1714; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 241.

Meiogyne paucinervia Merr. in Philip. Journ. Sci. 10 (1915) Bot. 241.

Unona virgata Rolfe in Journ. Bot. 23 (1885) 210; Vidal Phan.

Cuming. Philip. (1885) 92, Rev. Pl. Vasc. Filip. (1886) 41, non Blume.

Luzon (Sorsogon), Samar, Leyte, Mindanao (Agusan), *Cuming 1738, Wenzel 645, 1060, 153, Sablaya 23, Elmer 13984, 15321, 15555, F. B. 21657 Sherfese, B. S. 15381 Ramos, Merrill Phil. Pl. 1640*. In forests at low and medium altitudes. Endemic.

Local name: Hanloaihon (Mbo.).

MEIOGYNE PHILIPPINENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1714; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 242.

Mindanao (Davao), *Elmer 11318*. In forests, altitude about 1,200 m. Endemic.

Local name: Pugan (Bag.).

19. ARTABOTRYS R. Brown

ARTABOTRYS CUMINGIANA Vidal Phan. Cuming. Philip. (1885) 92, 169, Rev. Pl. Vasc. Filip. (1886) 39; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 54.

Artabotrys cumingiana Vidal var. *subglabra* Elm. Leaf. Philip. Bot. 5 (1913) 1705.

Luzon (Cagayan, Union, Pangasinan, Ilocos Norte, Bataan, Nueva Ecija), Sibuyan, Mindoro, Palawan, *F. B. 2950 Borden, 6633 Curran, B. S. 22719 Castillo, 32820, 39810 Ramos, Merrill 9632, Elmer 12338*. In forests at low and medium altitudes. Endemic.

Local name: Alagág (Ilk.).

ARTABOTRYS LUTEUS Elm. Leaf. Philip. Bot. 1 (1908) 290.

Artabotrys cumingiana Vidal var. *reticulata* Elm. Leaf. Philip. Bot. 5 (1913) 1706.

Luzon (Tayabas), Catanduanes, Mindanao (Agusan), *Elmer 9136, 13608, B. S. 30158 Ramos*. In forests up to 1,100 m altitude. Endemic.

Local name: Kabak-kábak (Mbo.).

ARTABOTRYS CAGAYANENSIS Merr. in Philip. Journ. Sci. 14 (1919) 384.

Luzon (Cagayan), *Addurn 136, B. S. 22719 Castillo*. On forested slopes at low altitudes. Endemic.

ARTABOTRYS MONOGYNUS Merr. in Philip. Journ. Sci. 14 (1919) 383.

Luzon (Zambales), *B. S. 26826 Edaño*. In forests at low altitudes. Endemic.

ARTABOTRYS SUAVEOLENS Blume Fl. Jav. Anon. (1828) 62, *t. 30, 31 D*; King in Ann. Bot. Gard. Calcutta 4 (1893) 46, *t. 61*; F.-Vill. Novis. App. (1880) 5; Vidal Sinopsis Atlas (1883) 12, *t. 4, f. D.*, Phan. Cuming. Philip. (1886) 39; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 16.

Unona suaveolens Blume Bijdr. (1825) 17.

Unona corniculata Blanco Fl. Filip. (1837) 469, ed. 2 (1845) 326, ed. 3, 2 (1878) 240.

Artabotrys rolfei Vidal Rev. Pl. Vasc. Filip. (1886) 39; Ceron Cat. Pl. Herb. Manila (1892) 10; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 54.

Artabotrys hamata Vidal Phan. Cuming. Philip. (1885) 92, non Blume.

Artabotrys corniculata Merr. Sp. Blancoanae (1918) 150.

Luzon (Zambales, Bataan, Rizal, Laguna, Tayabas), Polillo, Mindoro, Palawan, Mindanao, Basilan. In dry thickets and in second-growth forests at low altitudes. India through Malaya to the Moluccas.

Local names: Báhai-balagán (C. Bis.); kintubo (Sub.); súsong-damúlag (Tag.).

ARTABOTRYS UNCINATUS (Lam.) Merr. in Philip. Journ. Sci. 7 (1912) Bot. 234, Fl. Manila (1912) 206, Sp. Blancoanae (1918) 150.

Anona uncinata Lam. Encycl. 2 (1786) 127.

Unona uncinata Dunal Monog. Anon. (1817) 105, *t. 25*; DC. Prodr. 1 (1824) 90; Blanco Fl. Filip. ed. 2 (1845) 324, ed. 3, 2 (1878) 237, *t. 194*.

Uvaria sinensis Blanco Fl. Filip. (1837) 465.

Artabotrys odoratissimus R. Br. in Bot. Reg. *t. 423*; F.-Vill. Novis. App. (1880) 5; Vidal Sinopsis Atlas (1883) 12, *t. 4, f. E*; King in Ann. Bot. Gard. Calcutta 4 (1893) 44; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 16.

Luzon to Mindanao, in occasional cultivation; introduced from southern China. Pantropic in cultivation, probably a native of southern China.

Local names: Alaṅgigan (Ilk.); alaṅgálang-sonson (Tag.); ilang-ilang-sina (Tag.); ilangilang-songsong (Tag.).

ARTABOTRYS VIDALIANA Elm. Leaf. Philip. Bot. 5 (1913) 1707.

Palawan, *Elmer 13007*. In forests, altitude about 150 m. Endemic.

EXCLUDED SPECIES

ARTABOTRYS PLEUROCARPUS Maingay; F.-Vill. Novis. App. (1880) 5.

20. CYATHOCALYX Champion

CYATHOCALYX ACUMINATUS C. B. Rob. in Bull. Torr. Bot. Club. 35 (1908) 66, 74.

Mindanao (Zamboanga), *Williams 2143*. In forests, at low altitudes. Endemic.

CYATHOCALYX GLOBOSUS Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 17, Philip. Journ. Sci. 1 (1906) Suppl. 55.

Luzon (Cagayan, Ilocos Norte, Ilocos Sur, Union, Benguet, Bataan, Rizal, Tayabas), *F. B.* 481, 310, 523 *Barnes*, 622, 646, 657, 667, 1529, 1536, 1735 *Borden*, 13424, 13420 *Klemme*, 10810 *Curran*, *Merrill* 2130. In primary forests at low and medium altitudes. Endemic.

Local names: Alínau (Ilk.); baniakáu (Ilk.); bohokan (Bik.); dalínas (Tag.); damarau (C. Bis.); ilangilang-gúbat (Tag.); kutipí (Ilk.); lanútan (Tag.); latáuan (Tag.); latúan (Tag.); tapuláu (Tag.).

EXCLUDED SPECIES

CYATHOCALYX ZEYLANICUS Champ.; F.-Vill. Novis. App. (1880) 5.

21. FISSISTIGMA Griffith

(*Melodorum* Hooker f. and Thompson non Loureiro)

FISSISTIGMA RUFUM (Presl) Merr. in Philip. Journ. Sci. 15 (1919) 136.

Melodorum rufum Merr. in Philip. Journ. Sci. 3 (1908) Bot. 223.

Anona rufa Presl Rel. Haenk. 2 (1835) 75; F.-Vill. Novis. App. (1880) 7.

Melodorum clementis Merr. in Philip. Journ. Sci. 3 (1908) Bot. 136.

Melodorum latifolium F.-Vill. Novis. App. (1880) 7; Vidal Phan. Cuming. Philip. (1885) 93, Rev. Pl. Vasc. Filip. (1886) 42, non Hook. f. & Th.

Luzon (Laguna, Bataan, Rizal, Sorsogon), Mindoro, Mindanao, *Cuming* 1548, *Presl*, *Elmer* 16709, *Clemens* 1097, *B. S.* 1871 *Foxworthy*, 13527, 15113, 21984 *Ramos*, *F. B.* 26938 *Phasis*, *Merrill* 2294. In forests at low and medium altitudes. Endemic.

This species is allied to the so-called Malayan *Melodorum latifolium* (Dunal) Hook. f. & Th. but has smaller flowers and fruits. The genus *Melodorum* Lour. is entirely distinct from Hooker f. and Thomson's interpretation of it.

Local names: Alákai (Tag.); auaán (Bag.).

EXCLUDED SPECIES

MELODORUM FULGENS Hook. f. & Th.; F.-Vill. Novis. App. (1880) 7.

22. DREPANANTHUS Maingay

DREPANANTHUS APOENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1708 (*Deprananthus*).

Samar, Leyte, Mindanao (Agusan, Bukidnon, Lanao), *Elmer* 11290, 10843, 13625, *Clemens* 1084, *B. S.* 24322 *Ramos*, 15666 *Fénix*, *F. B.* 24361 *Cortez & Fernandez*, 20779 *Miranda*, *Merrill Phil. Pl.* 1662, *Sablaya* 48, *Wenzel* 1129. In forests at low and medium altitudes, ascending to 900 m. Endemic.

Local names: Binayakau (Buk.); burak (S. L. Bis.); managakut (Bag.); manayasau (Mbo.); manaykut (Bag.); mariganda (Buk.); pagong-págong (S. L. Bis.); timinanan (Mbo.).

DREPANANTHUS LONGIFLORUS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 201.

Polillo, *B. S. 10353 McGregor*. In forests at low altitudes. Endemic.
Local name: Bagna (Tag.).

DREPANANTHUS PHILIPPINENSIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 137.

Luzon (Camarines) Mindoro, Mindanao (Lanao), *F. B. 6892, 6896 Merritt, Clemens 1016, B. S. 33752 Ramos & Edaño, F. B. 27414 Alambra*. In forests at medium altitudes. Endemic.

Local name: Tañgit-gúbat (Bik.).

23. **DASYMASCHALON** Blume

DASYMASCHALON CLUSIFLORUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 237.

Unona clusiflora Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 13, Philip. Journ. Sci. 1 (1906) Suppl. 53.

Polyalthia clusiflora C. B. Rob. in Bull. Torr. Bot. Club 35 (1908) 68; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 406.

Unona dasymaschala F.-Vill. Novis. App. (1880) 5, non Blume.

Unona longiflora Vidal Cat. Pl. Prov. Manila (1880) 16, non Roxb.

Babuyan Islands to Palawan and Mindanao. Common in forests at low and medium altitudes. Endemic.

Local names: Buyanus (C. Bis.); kalabúyo (Tag.); kalimatas (Tagb.); lanután (Tag.); lanután-putí (Tag.); malaátis (Tag.); malamaróbo (S. L. Bis.); malasagiát (Ilk.); panagit (C. Bís.); sagapan (Bag.); sagót (Ilk.).

Var. **MEGALANTHUM** Merr. in Philip. Journ. Sci. 10 (1915) Bot. 237.

Luzon (Camarines), *F. B. 10686 Curran*. On hills near the sea. Endemic.

DASYMASCHALON OBLONGATUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 237.

Luzon (Benguet, Lepanto, Nueva Vizcaya), *Merrill 9703, Elmer 6016, F. B. 94476 Darling, 10884 Curran*. In thickets about limestone cliffs and boulders, altitude 900 to 1,300 m. Endemic.

DASYMASCHALON SCANDENS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 238.

Palawan, *Elmer 12803, Merrill 9277*. On forested slopes at low and medium altitudes. Endemic.

24. **OXYMITRA** Hooker f. and Thomson

OXYMITRA AURICULATA Elm. Leaf. Philip. Bot. 5 (1913) 1725.

Panay, Bohol, Mindanao (Agusan), *Cuming 1823, McGregor, Elmer 13586*. In forests at low and medium altitudes. Endemic.

Local name: Gauod (Mbo.).

OXYMITRA BAKERI Merr. in Philip. Journ. Sci. 10 (1915) Bot. 259.

Luzon (Laguna, Nueva Ecija, Camarines, Albay, Sorsogon), Alabat, Catanduanes, *Baker 3691, Elmer 15902, Merrill 10468, B. S. 23521, 30181*

Ramos, 23162 *McGregor*, 6290 *Robinson*, 26371 *Ramos & Edaño*. In damp forests at low altitudes. Endemic.

Local name: Uisiuis (Neg.).

OXYMITRA GLAUCA Hook. f. & Th. Fl. Ind. 1 (1855) 146; King. in Ann. Bot. Gard. Calcutta 4 (1893) 128, t. 171 A.

Negros, *Whitford* 1484. In dipterocarp forests at low altitudes. Malay Peninsula, Penang, Sumatra, Borneo.

OXYMITRA LAGUNENSIS Elm. Leaf. Philip. Bot. 1 (1908) 293.

Luzon (Pangasinan, Bataan, Laguna, Sorsogon), Mindoro, Samar, Panay, Mindanao, *Elmer* 8061, 15298, *Merrill* 5629, *B. S.* 29931 *Fénix*, 20417 *Borden*, 24311 *Ramos*, 31208, 36947 *Ramos & Edaño*, *F. B.* 1773 *Borden*. In forests at low and medium altitudes. Endemic.

Local names: Pañgaguason (S. L. Bis.); pañgod (Sub.).

OXYMITRA LANCEOLATA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 260.

Leyte, *B. S.* 15342 *Ramos*. In forests at low and medium altitudes. Endemic.

OXYMITRA LONGIFLORA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 134.

Mindanao (Zamboanga, Lanao), *Clemens* 689, *B. S.* 36919 *Ramos & Edaño*. In forests along streams, altitude about 700 m. Endemic.

Local name: Nanagon (Sub.).

OXYMITRA MULTINERVIA Merr. in Philip. Journ. Sci. 14 (1919) 388.

Catanduanes, *B. S.* 30456 *Ramos*. In forests at low altitudes. Endemic.

OXYMITRA OBTUSIFOLIA Elm. Leaf. Philip. Bot. 1 (1908) 294.

Mindoro (Camarines, Sorsogon), Leyte, Mindanao (Agusan), *Elmer* 7364a, 9423, 13412, *B. S.* 22063, 23450, 23339 *Ramos*. In forests at low and medium altitudes. Endemic.

Local name: Kalag (Mbo.).

OXYMITRA OLIGOPHLEBIA Merr. in Philip. Journ. Sci. 17 (1920) 250.

Bucas Grande, *B. S.* 35068 *Ramos & Pascasio*. In dry forests at low altitudes. Endemic.

OXYMITRA PAUCINERVIA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 135.

Oxymitra urdanetensis Elm. Leaf. Philip. Bot. 5 (1913) 1725.

Mindanao (Agusan, Lanao), *Clemens* 520, *Elmer* 13946. In forests, altitude 700 to 1,200 m. Endemic.

Local name: Talimaghat (Mbo.).

OXYMITRA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 261.

Luzon (Cagayan), Palawan, *F. B.* 17901 *Barros*, *Merrill* 9413. In forests at low altitudes. Endemic.

OXYMITRA PLATYPHYLLA Merr. in Philip. Journ. Sci. 14 (1919) 388.

Luzon (Laguna), *F. B.* 26360 *Mabesa*. In forests, altitude 400 to 500 m. Endemic.

OXYMITRA PUBESCENS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 267.

Luzon (Cagayan), *B. S.* 13870 *Ramos*, January, 1912. In forests at low altitudes. Endemic.

25. ANONA Linnaeus

ANONA MURICATA Linn. Sp. Pl. (1753) 536; Miq. Fl. Ind. Bat. 1² (1858) 34; Blanco Fl. Filip. ed. 2 (1845) 326, ed. 3, 2 (1878) 241, *t.* 196; F.-Vill. Novis. App. (1880) 7; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 20, Fl. Manila (1912) 207, Sp. Blancoanae (1918) 150; Wester in Philip. Journ. Sci. 7 (1912) Bot. 113, 118, *t.* 7, 10.

Cultivated throughout the Philippines. Introduced from tropical America by the Spaniards, now pantropic in cultivation. The soursop.

Local names: Attí (Ibn.); babána (P. Bis.); bayubána (Ilk.); gayubáno (Ilk., Ibn.); guayabáno (Tag.); guanabáno (Tag.); guiábano (Sbl., Tag.); guyábana (Tag.); labanus (Sul.); llabanos (Bis.).

ANONA RETICULATA Linn. Sp. Pl. (1753) 537; Miq. Fl. Ind. Bat. 1² (1858) 34; Blanco Fl. Filip. (1837) 470, ed. 2 (1845) 327, ed. 3, 2 (1878) 242, *t.* 197; F.-Vill. Novis. App. (1880) 7; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 23, 27 (1905) 16, Fl. Manila (1912) 207, Sp. Blancoanae (1918) 150; Wester in Philip. Journ. Sci. 7 (1912) Bot. 113, 117, *t.* 9, *f.* B.

Cultivated throughout the Philippines. Introduced from tropical America at an early date by the Spaniards, now pantropic in cultivation. The bullock's heart.

Local names: Anonas (most dialects); sarikaya (Sul.).

ANONA SQUAMOSA Linn. Sp. Pl. (1753) 537; Blanco Fl. Filip. (1837) 469, ed. 2 (1845) 327, ed. 3, 2 (1878) 241, *t.* 192; Miq. Fl. Ind. Bat. 1² (1858) 33; F.-Vill. Novis. App. (1880) 7; Vidal Sinopsis Atlas (1883) 12, *t.* 5, *f.* E, Phan. Cuming. Philip. (1885) 93; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 23, 27 (1905) 16, Fl. Manila (1912) 208, Sp. Blancoanae (1918) 150; Wester in Philip. Journ. Sci. 7 (1912) Bot. 113, 115, *t.* 6, 9, *f.* A.

Cultivated throughout the Philippines, occasionally spontaneous. Introduced from tropical America by the Spaniards at an early date, now pantropic in cultivation. The custard apple or sweetsop. Widely known in the Philippines as *átis* or *átes* or *yátes*.

Anona cherimolia Mill. and *A. glabra* Linn. are recent introductions in the Philippines; see Wester in Philip. Journ. Sci. 7 (1912) Bot. 112, 113, 119.

DOUBTFUL AND EXCLUDED GENERA

KINGSTONIA NERVOSA Hook. f. & Th.; F.-Vill. Novis. App. (1883) 347.

MILIUSIA BAILLONI Pierre Fl. Forest. Cochinch. 1 (1881) *t.* 38.

The type of the species is an Indo-China specimen; *Cuming 1198* cited as possibly representing the species is *Saccopetalum longipes* Vid. Pierre's species is a *Saccopetalum*, if this genus be retained as distinct from *Miliusia*.

SOALA LITORALIS Blanco Fl. Filip. (1837) 437, ed. 2 (1845) 304, ed. 3, 2 (1878) 199; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 16, Sp. Blancoanae (1918) 151.

This has nothing to do with *Cyathocalyx zeylanicus* Champ. to which it was reduced by F.-Villar, but its true status cannot be determined from Blanco's description or any other data at present available. The floral

characters apparently appertain to *Uvaria*, but the description of the fruit does not appertain to any anonaceous plant. It is suspected that Blanco's description was based on material of two entirely different and perhaps not even closely allied species. Blanco's specimens were from Bauang, Batangas Province, Luzon; the Tagalog name is given as *soal*.

MYRISTICACEAE

1. MYRISTICA Linnaeus

MYRISTICA AGUSANENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2775.

Luzon (Sorsogon), Mindanao (Agusan, Bukidnon), *Elmer 13284, 16010* (*M. sorsogonensis* Elm.), *F. B. 10556 Curran, B. S. 26011 Félix, 38971 Ramos & Edaño*. In forests at low and medium altitudes. Endemic.

Local names: Balai (Bik.); dugóan (Mbo.).

MYRISTICA CAGAYANENSIS Merr. in Philip. Journ. Sci. 17 (1920) 255.

Luzon (Cagayan), *F. B. 24277 Bernardo*. In primary forests at low altitudes. Endemic.

Local name: Ngab-ngáb (Neg.).

MYRISTICA CUMINGII Warb. in Nov. Act. Akad. Naturf. 68 (1897) 442, *t. 13, f. 1-2*; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 21.

Myristica iners A. DC. Prodr. 14 (1857) 190, quoad Philip.; F.-Vill. Novis. App. (1880) 177; Vidal Phan. Cuming. Philip. (1885) 139, non Blume.

Mindoro, *Cuming 1570, F. B. 6884, 3730 Merritt*. In forests at low altitudes. Endemic.

Local names: Dugúan (Tag.); malatálang (Tag.).

MYRISTICA GUATTERIAEFOLIA A. DC. in Ann. Sci. Nat. Bot. IV 4 (1855) 30, Prodr. 14 (1857) 193; Miq. Fl. Ind. Bat. 1² (1858) 61; F.-Vill. Novis. App. (1880) 177; Vidal Phan. Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 221; Warb. in Nov. Act. Akad. Naturf. 68 (1897) 412, *t. 13, f. 1-4*, Perk. Frag. Fl. Philip. (1904) 49; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 21, Philip. Journ. Sci. 3 (1908) Bot. 407; Elm. Leaf. Philip. Bot. 3 (1911) 1062.

Babuyan Islands and northern Luzon (Cagayan) to Palawan and Mindanao. Common in forests at low and medium altitudes; very closely allied to *Myristica philippensis* Lam. Borneo, Labuan.

Local names: Alanagni (Sul.); barakbak (Neg.); dagáun (S. L. Bis.); dalihagan (Neg.) dogóan (S. L. Bis.); dogúan (Tag., P. Bis.); dukan (Tag., P. Bis.); dughán (P. Bis.); dugúan (Tag., Bik.); kamas (Sul.); lago (Tagb.); laho (Kuy.); talang-búndok (Tag.); tukan (Tag.).

MYRISTICA LANCIFOLIA nom. nov.

Gymnacranthera lanceolata Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 55; Elm. Leaf. Philip. Bot. 3 (1911) 1058, non *Myristica lanceolata* Wall.

Luzon (Cagayan, Bataan, Rizal), Sibuyan, *F. B. 3236 Meyer, 17202 Curran, Ahern 758, Elmer 12537, Loher 6716*. In forests at low and medium altitudes. Endemic.

Local name: Malatálang (Tag.).

MYRISTICA LAXIFLORA Merr. in Philip. Journ. Sci. 17 (1920) 254.

Basilan, Tinago, *B. S.* 15498 Reillo, *Ahern* 421. In primary forests at low altitudes. Endemic.

MYRISTICA MINDORENSIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 281.

Mindoro, *F. B.* 3698 Merritt. In forests at low altitudes. Endemic.

MYRISTICA NEGROSENSIS (Elm.) comb. nov.

Gymnacranthera negrosensis Elm. Leaf. Philip. Bot. 2 (1909) 576, 3 (1911) 1057.

Negros, Sibuyan, *Elmer* 12414, 10133. In forests up to an altitude of 1,200 m; the bracteolate flowers clearly remove this from *Gymnacranthera*. Endemic.

Local names: Dugan (P. Bis.); kalau (C. Bis.).

MYRISTICA NITIDA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 282.

Luzon (Nueva Ecija, Laguna, Tayabas, Camarines, Sorsogon), Samar, Ticao, Negros, Mindanao (Surigao, Zamboanga), *F. B.* 22199 Alvarez, 24099 Contreras, 12523 Rosenbluth, 23029 Ponce, 24935 Bawan, 27411 Alambra, 21141 Miranda, 10224 Curran, 23709, 22046 Alvarez, *B. S.* 23322, 24147, 22046 Ramos, *Merrill Phil. Pl.* 1015, 1542. In forests at low and medium altitudes; closely allied to *Myristica cumingii* Warb., but with much larger fruits. Endemic.

Local names: Dugang (C. Bis.); dugúan (Bik.); mala-ambalinad (S. L. Bis.); malabakau (C. Bis.); ugau (Bik.).

MYRISTICA NIVEA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 191.

Mindanao (Zamboanga), Basilan, *B. S.* 37070 Ramos & Edaña, *F. B.* 3454 Hutchinson, *Williams* 2145, *Copeland*. In forests at low altitudes. Endemic.

Local names: Kanon (Sub.); uyat-uyat (Yak.).

MYRISTICA PALAWANENSIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 283.

Palawan, *Merrill* 9253, *F. B.* 4737 Manalo. In forests at low altitudes. Endemic.

MYRISTICA PHILIPPENSIS Lam. Act. Paris (1788) 161, *Encycl.* 4 (1797) 387; Willd. Sp. Pl. 4² (1805) 870; Spreng. Syst. 3 (1826) 65; Miq. Fl. Ind. Bat. 1² (1858) 60; Baill. in Bull. Soc. Linn. Paris 1 (1885) 455; Warb. in Nov. Act. Akad. Naturf. 68 (1897) 386, t. 12, f. 1-8; Perk. Frag. Fl. Philip. (1904) 49; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 20, Philip. Journ. Sci. 1 (1906) Suppl. 55, Sp. Blancoanae (1918) 151.

Myristica luzonica Blanco Fl. Filip. (1837) 664, ed. 2 (1845) 462, 463, ed. 3, 3 (1879) 69, 70; A. DC. Prodr. 14 (1857) 207; Miq. Fl. Ind. Bat. 1² (1858) 72.

Myristica commersonii Blume Rumphia 1 (1835) 181; Miq. Fl. Ind. Bat. 1² (1858) 61.

Myristica macrocarpa Blume op. cit. 185; A. DC. Prodr. 14 (1857) 207; F.-Vill. Novis. App. (1880) 178.

Myristica bracteata A. DC. (incl. var. *longifolia* A. DC.) in DC. Prodr. 14 (1857) 192; F.-Vill. Novis. App. (1880) 177; Vidal Phan. Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 221.

Northern Luzon (Cagayan) to Mindanao. Common in forests at low and medium altitudes. Endemic.

Local names: Bagir (Ilk.); balintua (Sul.); dogan (Tag., Bik.); dugan (Tag.); dugóan (Tag.); dugon (Tag.); dugúan (Tag., Pamp.); durúgo (Tag.); hindurúgo-babáe (Tag.); kutu (Ting.); lagu (Yak.); mabólong-gúbat (Tag.); malamabólo (Pang.); matumbau-babáe (Tag.); mundára (Ilk.); pálong (Ilk.); paraya (Pamp.); pau (Ting.); talang-tálang (Tag.); taliaghan (Neg.); tambaláu (Sbl., Tag.); tambalau-babáe (Tag.); tambau (Tag.); tatalong (Sub.).

MYRISTICA PLUMERIAEFOLIA Elm. Leaf. Philip. Bot. 3 (1911) 1063.

Mindanao (Davao), *Elmer 11063*. In forests along Baractan River, altitude about 600 m. Endemic.

Local name: Lago (Bag.).

MYRISTICA SIMIARUM A. DC. in Ann. Sci. Nat. Bot. IV 4 (1855) 29, Prodr. 14 (1857) 192; Miq. Fl. Ind. Bat. 1² (1858-59) 60; F.-Vill. Novis. App. (1880) 177; Warb. in Nov. Act. Akad. Naturf. 68 (1897) 397, t. 13, f. 1-2.

Myristica discolor Merr. in Philip. Journ. Sci. 13 (1918) Bot. 281.

Luzon (Cagayan, Ilocos Norte, Union, Bataan, Laguna, Tayabas, Camarines), Samar, Leyte, Mindanao, *Adduru 128, B. S. 27276, 19465, 24472 Ramos, Merrill Phil. Pl. 1543, 1609, Elmer 7377 (Gymnacranthera sulphurascens Elm.), 13502, F. B. 26484, 23632 Paraiso, 2630 Meyer, 1244 Borden, 10641, 13155 Curran, 21649 Sherfesse, 23917 Ponce, Weber 1076, Whitford 470*. In forests at low and medium altitudes. Endemic.

Local names: Anuping (Sul.); dugúan (C. Bis.); lupáu (Ilk.); paria (Tag.); pokípok (Ilk.); tambaláu (Tag.).

MYRISTICA UMBELLATA Elm. Leaf. Philip. Bot. 5 (1913) 1816.

Palawan, *Elmer 12820, 13166*. In forests at medium altitudes. - Endemic.

MYRISTICA URDANETENSIS (Elm.) comb. nov.

Gymnacranthera urdanetensis Elm. Leaf. Philip. Bot. 8 (1915) 2773.

Mindanao (Agusan, Cotabato), *Elmer 13294, 13295, F. B. 23041 Ferraris*. In forests, altitude about 540 m. Endemic.

Local names: Bantolinau (Mbo.); imos (Mbo.).

MYRISTICA WENZELII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 270.

Leyte, Samar, Mindanao (Surigao), *Wenzel 1152, 1887, B. S. 17462, 24507 Ramos, F. B. 23019 Razon*. In forests at low altitudes. Endemic.

Local name: Dugúan (S. L. Bis.).

EXCLUDED SPECIES

MYRISTICA ATTENUATA Wall.; F.-Vill. Novis. App. (1880) 178.

MYRISTICA CORTICOSA Hook. f. & Th.; Vidal Sinopsis Atlas (1883) 36, t. 77, f. C.

The figure is copied from Blume's *Rumphia* and represents *Knema glauca* (Blume) Warb.

MYRISTICA FATUA Hout.; F.-Vill. Novis. App. (1880) 177; Vidal Sinopsis Atlas (1883) 36, t. 77, f. B.

I do not recognize the form figured by Vidal; Houttuyn's species does not occur in the Philippines.

MYRISTICA FRAGRANS Houtt.; A. DC. Prodr. 14 (1857) 189; F.-Vill. Novis. App. (1880) 177.

The nutmeg does not occur in the Philippines; *Cuming 2418* cited by A. de Candolle as Philippine was from Singapore.

MYRISTICA INTERMEDIA Blume; F.-Vill. Novis. App. (1880) 178.

MYRISTICA IRYA Gaertn.; F.-Vill. op. cit. 177.

MYRISTICA ITEOPHYLLA Miq.; F.-Vill. l. c.

MYRISTICA LAURINA Blume; F.-Vill. op. cit. 178.

MYRISTICA SUCCEDANA Blume; F.-Vill. op. cit. 177.

MYRISTICA SYLVESTRIS Houtt.; F.-Vill. l. c.

2. GYMNACRANTHERA Warburg

GYMNACRANTHERA ACUMINATA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 265.

Samar, *F. B. 21074 Sherfese, Cenabre, & Cortes*. In forests at low altitudes; closely allied to *Gymnacranthera paniculata* Warb. Endemic.

Local name: Dahaan (S. L. Bis.).

GYMNACRANTHERA MACROBOTRYS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 284.

Leyte, *Merrill Phil. Pl. 1171*. In forests at low altitudes. Endemic.

GYMNACRANTHERA PANICULATA (A. DC.) Warb. in Nov. Act. Akad. Naturf. 68 (1897) 370, *t. 20*; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 55; Elm. Leaf. Philip. Bot. 3 (1911) 1059.

Myristica paniculata A. DC. in Ann. Sci. Nat. Bot. IV 4 (1855) 31, Prodr. 14 (1857) 200; F.-Vill. Novis. App. (1880) 177; Vidal Phan. Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 221.

Gymnacranthera laxa Elm. Leaf. Philip. Bot. 8 (1915) 2772.

Babuyan Islands and northern Luzon to Mindanao and Basilan. In forests at low and medium altitudes; common. Endemic.

Local names: Anuping (Sul.); batu-batu (Bik.); dagang (Tag.); dumadáka (Ilk.); lagúan (Mang.); magandau (Mbo.); malakápa (Mang.); pamitógan (Ibn.); yango (P. Bis.).

GYMNACRANTHERA SULUENSIS Warb. in Nov. Act. Akad. Naturf. 68 (1897) 373; Elm. Leaf. Philip. Bot. 3 (1911) 1058.

Mindanao (Davao), Basilan, Sulu, *Elmer 10941*, (*Vidal 3546, 3561*). In forests. Endemic.

Local name: Magolomog (Bag.).

3. HORSFIELDIA Willdenow

HORSFIELDIA ACUMINATA Merr. in Philip. Journ. Sci. 17 (1920) 253.

Mindanao (Zamboanga, Davao), *F. B. 27507 De Mesa, B. S. 36770 Ramos & Edaño*. In primary forests at low altitudes. Endemic.

Local names: Danglas (Sub.); kaná (Mag.).

HORSFIELDIA ARDISIAEFOLIA (A. DC.) Warb. in Nov. Act. Akad. Naturf. 68 (1897) 274; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 55; Elm. Leaf. Philip. Bot. 3 (1911) 1061.

Myristica ardisiaefolia A. DC. in Ann. Sci. Nat. Bot. IV 4 (1855) 31, t. 4, Prodr. 14 (1857) 203; F.-Vill. Novis. App. (1880) 177; Vidal Phan. Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 221.

Luzon (Camarines, Sorsogon), Mindoro, Samar, Cebu, Leyte, *Cuming 1702, Elmer 7092, 17045 (H. vulcanica Elm.), Whitford 1412*. In forests at low altitudes. Endemic.

Local names: Dagóan (C. Bis.); tapol (Tagb.)

HORSFIELDIA CONFERTIFLORA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 285.

Luzon (Laguna, Tayabas, Bataan, Camarines), Mindoro, Palawan, Leyte, Mindanao, Basilan, *F. B. 3183 Ahern's collector, 8049 Curran & Merritt, 7509 Curran, 2487 Borden, 25378 Mabesa, 18891, 18893 Miranda, Wenzel 920*. In forests at low altitudes. Endemic.

Local names: Dugodugóan (Tag.); dugúan (Tag., Bik.); hindang-atison (S. L. Bis.); tadhok (Sul.).

HORSFIELDIA MEGACARPA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 286.

Luzon (Cagayan, Laguna, Tayabas), Mindanao (Misamis), *B. S. 16527 Ramos, F. B. 17044 Curran, 20844, 19888 Villamil (H. villamilii Elm.), 7787 Curran & Merritt, 11885 Miranda*. In forests at low and medium altitudes. Endemic.

Local name: Lánot (Ibn.).

HORSFIELDIA MERRILLII Warb. in Perk. Frag. Fl. Philip. (1904) 49; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 274.

Luzon (Tayabas, Camarines), Mindoro, Panay, Samar, Leyte, Camiguin de Misamis, *Merrill 2233, 2370, 5772, 4031, Phil. Pl. 1354, 1607, Baker 3338, F. B. 25428, 25575 Dululao, 25408 Labitag, 14270 Aguilar, 3696, 3617, 6755, 6905, 8625 Merritt, 11862 Amarillas, B. S. 30838, 31293, 30874 Ramos & Edaño, McGregor 151*. In forests at low and medium altitudes. Endemic.

Local names: Dugan (Tag.); dugóan-ligaso (Tag.); dugon (Tag.); dugúan (Tag.); yabnob (Tag.).

HORSFIELDIA OBLONGATA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 286.

Luzon (Tayabas, Camarines), Samar, Leyte, *Merrill Phil. Pl. 1393, F. B. 24927 Bawan, 12731 Rosenbluth, 13573 Lasquety, B. S. 22145, 17457 Ramos, 30986 Ramos & Edaño*. In forests at low and medium altitudes. Endemic.

Local name: Hindang-atison (S. L. Bis.).

HORSFIELDIA OBSCURINERVIA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 265.

Luzon (Camarines), *B. S. 33693 Ramos & Edaño, F. B. 26503 De Mesa & Magistrado*. In forests at low altitudes. Endemic.

Local name: Dugúan (Bik.).

HORSFIELDIA RAMOSII Merr. in Philip. Journ. Sci. 17 (1920) 254.

Bucas Grande, *B. S. 35047 Ramos & Pascasio*. In dry forests at low altitudes. Endemic.

HORSFIELDIA Warburgiana Elm. Leaf. Philip. Bot. 3 (1911) 1061.
 Sibuyan, *Elmer 12297*. In forests, altitude about 125 m. Endemic.
 Local name: Lagasi (P. Bis.).

4. KNEMA Loureiro

KNEMA ACUMINATA Merr. in Philip. Journ. Sci. 17 (1920) 256.

Luzon (Isabela), *F. B. 11266 Klemme*. In primary forests at low altitudes. Endemic.

KNEMA ALVAREZII Merr. in Philip. Journ. Sci. 13 (1918) Bot. 288.

Luzon (Nueva Ecija), *F. B. 22395, 22397 Alvarez*. In forests, altitude about 850 m. Endemic.

KNEMA GLAUCA (Blume) Warb. in Nov. Act. Akad. Naturf. 68 (1897) 594, t. 25, f. 1-3.

Myristica glauca Blume Bijdr. (1825) 576, Rumphia 1 (1835) 182, t. 60.

Samar, Leyte, Palawan, *Merrill 9764, F. B. 21605 Agama, B. S. 17590, 15277 Ramos, Wenzel 1808*. In forests at low altitudes. Andaman and Nicobar Islands, Malay Peninsula, Bangka, Sumatra, Java.

KNEMA GLOMERATA (Blanco) Merr. in Journ. Str. Branch Roy. As. Soc. 76 (1917) 81, Sp. Bloancoanae (1918) 151.

Sterculia glomerata Blanco Fl. Filip. (1837) 764, ed. 2 (1845) 525, ed. 3, 3 (1879) 164; F.-Vill. Novis. App. (1880) 27; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 24, 73.

Sterculia decandra Blanco Fl. Filip. (1837) 766, ed. 2 (1845) 526, ed. 3, 3 (1879) 166.

Myristica heterophylla F.-Vill. Novis. App. (1880) 178; Vidal Rev. Pl. Vasc. Filip. (1886) 220.

Knema heterophylla Warb. in Nov. Act. Akad. Naturf. 68 (1807) 573, t. 25, f. 1-2; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 55, 3 (1908) Bot. 407.

Myristica corticosa F.-Vill. Novis. App. (1880) 178; A. DC. Prodr. 14 (1857) 205, quoad Philip.; Vidal Phan. Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 220, non Hook. f. & Th.

Myristica laurina Vidal Rev. Pl. Vasc. Filip. (1886) 221, non Blume.
Myristica glaucescens Ceron Cat. Pl. Herb. Manila (1892) 141, non Hook. f. & Th.

Knema gitingensis Elm. Leaf. Philip. Bot. 3 (1911) 1065.

Gymnacranthera cryptocaryoides Elm. op. cit. 1060.

Babuyan Islands to Mindanao; common in forests at low and medium altitudes. Borneo.

Local names: Alas (Ig.); anoling (P. Bis.); dagdagan (Ibn.); dagúi (Tag.); dara-dára (Ilk.); dogóan (C. Bis., Mbo.); dogúan (Sbl., Tag., S. L. Bis.); dugúan (Tag., Bik., P. Bis.); dumadága (Ap.); dumadára (Ilk.); durúgo (Tag.); hindurúgu (Tag.); lapak (Tag.); margabúlo (Tag.); matumbau-laláki (Tag.); panigan (Neg.); parúgan (Tag.); talihagan (Neg.); tambalau (Tag.); tambalau-laláki (Tag.); ubían (Ilk.).

KNEMA LATERICA Elm. Leaf. Philip. Bot. 5 (1913) 1815.

Palawan, *Elmer 12757, F. B. 21612 Agama*. In forests at low altitudes. Endemic.

Local name: Tambaláu (Tagb.).

KNEMA MINDANAENSIS (Warb.) comb. nov.

Myristica mindanaensis Warb. in Nov. Act. Akad. Naturf. 68 (1897) 497, t. 13, f. 1-2; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 21, Philip. Journ. Sci. 3 (1908) Bot. 76.

Myristica cinerea A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 35, non Poir.

Mindanao, Basilan, *F. B.* 27048 Jimenez, 23377 Acuña, 3985, 3961 Hutchinson, 18942 Miranda, *B. S.* 15421, 15472 Reillo, 37366, 37330, 36323, 37443 Ramos & Edaño, Ahern 393, 589, Clemens 495. In forests at low and medium altitudes. Endemic.

Local names: Biuku (Sul.); bunud (C. Bis.); dugan (C. Bis.); dugúan (C. Bis.); duhao (Sul.); salindupong (Lan.); tambalau (C. Bis.).

KNEMA PARVIFOLIA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 287.

Luzon (Camarines, Albay), *F. B.* 10573 Curran, 22641 Alvarez, *B. S.* 33456, 33631 Ramos & Edaño. In forests at low and medium altitudes. Endemic.

Local name: Dugúan (Bik.).

KNEMA STELLATA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 182.

Samar, *B. S.* 24430, 24276 Ramos, Sablaya 52, Merrill Phil. Pl. 1706. In forests at low altitudes. Endemic.

Local name: Dugúan (S. L. Bis.).

KNEMA STENOCARPA Warb. in Nov. Act. Akad. Naturf. 68 (1897) 577; Elm. Leaf. Philip. Bot. 3 (1911) 1064.

Mindanao (Lanao, Davao, Zamboanga, Basilan), Clemens 946, Elmer 11935, Williams 2876, 2340, *F. B.* 20745 Rafael & Ponce, *B. S.* 36682, 37079 Ramos & Edaño. Endemic.

Local names: Kalahaglahag (Sul.); lago (Bag.); libago (Bag.).

KNEMA VIDALII Warb. in Nov. Act. Akad. Naturf. 68 (1897) 615.

Myristica iners Vidal Rev. Pl. Vasc. Filip. (1886) 221, p.p., non Blume.

Luzon (Nueva Ecija, Tayabas), Marinduque, Negros, Vidal 1679, *B. S.* 13358 Ramos, 24623 Ramos & Edaño. In forests at low and medium altitudes. Endemic.

Local names: Alimpapáñgan (Neg.); dugúan (C. Bis.).

DOUBTFUL SPECIES

KNEMA CINEREA (Poir.) Warb. in Nov. Act. Akad. Naturf. 68 (1897) 611.

This Moluccan species is reported from Tawitawi Island, Sulu Archipelago, by Warburg. It is suspected that the specimen is referable to *Knema glomerata* (Blanco) Merr.

MONIMIACEAE

1. KIBARA Endlicher

KIBARA CLEMENSIAE Perk. in Engl. Bot. Jahrb. 45 (1911) 423, Pflanzenreich 49 (1911) 29.

Mindanao (Lanao), Clemens 541. In forests, altitude about 700 m. Endemic.

KIBARA CUSPIDATA Blume Mus. Bot. Lugd.-Bat. 2 (1852) 89; Perk. in Engl. Pflanzenreich 4 (1901) 61, 49 (1911) 33.

Kibara coriacea Merr. in Philip. Bureau Forest. Bull. 1 (1903) 21, non Tul.

Luzon (Cagayan, Nueva Ecija, Tayabas, Laguna), Mindoro, Catanduanes, Negros, Mindanao (Zamboanga, Cotabato), *B. S.* 13915, 23832, 30291, 39534 Ramos, 25431 Yates, 22348 Alvarez, *F. B.* 23667 Hinolan, Ahern 371, 350. In forests at low and medium altitudes. Malay Peninsula, Borneo, Nusa Kambangan.

Local names: Dorampunat (Neg.); malatambis (Sul.); pulug (Sul.).

KIBARA ELMERI Perk. in Engl. Bot. Jahrb. 45 (1911) 424, Pflanzenreich 49 (1911) 31.

Luzon (Benguet), *Elmer* 9119. In thickets or forests at medium altitudes; very close to *Kibara cuspidata* Blume. Endemic.

KIBARA GRANDIFOLIA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 15; Perk. in Engl. Pflanzenreich 49 (1911) 30.

Kibara mollis Merr. in Philip. Journ. Sci. 3 (1908) Bot. 225.

Kibara coriacea Ceron Cat. Pl. Herb. Manila (1892) 141, non Blume.

Luzon (Bulacan, Bataan, Rizal), *F. B.* 1158, 3387 Ahern's collector, 6408 Curran, *B. S.* 1070 Ramos, 34147 Ramos & Edaño, Merrill 1685 p. p., *Phil. Pl.* 1946. In forests at low and medium altitudes. Endemic.

Local name: Anonias (Tag.).

KIBARA MERRILLIANA Perk. in Engl. Bot. Jahrb. 45 (1911) 424, Pflanzenreich 49 (1911) 32.

Luzon (Benguet, Pangasinan, Laguna, Sorsogon), *Elmer* 6151, 15241, *B. S.* 29995 *Fénix*, 13522, 20404 Ramos. In forests at medium altitudes. Endemic.

KIBARA OBTUSA Blume Mus. Bot. Lugd.-Bat. 2 (1852) 89; Perk. in Engl. Pflanzenreich 4 (1901) 61, 49 (1911) 34, Engl. Bot. Jahrb. 45 (1911) 424.

Kibara depauperata Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 13.

Luzon (Benguet), *Elmer* 5959. In thickets about limestone boulders and ledges, altitude about 1,200 m. Celebes.

KIBARA STAPFIANA Perk. in Engl. Bot. Jahrb. 45 (1911) 424, Pflanzenreich 49 (1911) 33.

Luzon (Albay, Sorsogon), *Vidal* 3618 (Hb. Kew.), *Elmer* 17080. In forests at low and medium altitudes. Endemic.

KIBARA VIDALII Perk. in Engl. Bot. Jahrb. 45 (1911) 423, Pflanzenreich 49 (1911) 30.

Kibara coriacea Rolfe in Journ. Bot. 23 (1885) 215; *Vidal* Rev. Pl. Vasc. Filip. (1886) 221, non Tul.

Luzon (Bataan, Camarines), Mindanao (Bukidnon), *Vidal* 950 (Hb. Kew.), *Merrill Phil. Pl.* 1521 (as *K. cuspidata* Blume), *B. S.* 38680 Ramos & Edaño. In forests at low or medium altitudes. Endemic.

2. MATTHAEA Blume

MATTHAEA CALOPHYLLA Perk. in Engl. Pflanzenreich 4 (1901) 52, 49 (1911) 16, f. 7, A.

Cebu, *F. B.* 6413 *Espinosa*. In forests. Borneo.

Local name: Bago-bago (C. Bis.).

MATTHAEA CHARTACEA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 14; Perk. in Engl. Pflanzenreich 49 (1911) 19.

Matthaea pinchotiana Perk. in Engl. Bot. Jahrb. 45 (1911) 423, Pflanzenreich 49 (1911) 19.

Mindoro, *McGregor* 167, *F. B.* 4313, 11480 *Merritt*, 12199 *Rosenbluth*. In forests at low and medium altitudes. Endemic.

Local names: Alukba (Mang.); barau-barau (Mang.).

MATTHAEA ELLIPSOIDEA Merr. ex Perk. in Engl. Bot. Jahrb. 45 (1911) 423, Pflanzenreich 49 (1911) 19.

Kibara ellipsoidea Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 56, 2 (1907) Bot. 274.

Luzon (Bataan), *F. B.* 2843 *Meyer*. In forests, altitude about 900 m. Endemic.

MATTHAEA INTERMEDIA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 11.

Luzon (Tayabas, east coast), *B. S.* 28614 *Ramos & Edaño*. In forests, altitude about 1,000 m. Endemic.

MATTHAEA PHILIPPINENSIS Perk. in Engl. Bot. Jahrb. 45 (1911) 423, Pflanzenreich 49 (1911) 18.

Leyte, Negros, *F. B.* 12336, 12309 *Everett*, 16916 *Whitford*. In forests at low and medium altitudes. Endemic.

Local name: Saha (C. Bis.).

MATTHAEA PUBESCENS Merr. ex Perk. in Engl. Bot. Jahrb. 45 (1911) 422, Pflanzenreich 49 (1911) 16.

Mindanao (Davao), *Copeland*, *Weber*, *Elmer* 10699, 11895. In forests, altitude 600 to 1,000 m. Endemic.

Local names: Baringoras (Bag.); bayung-bayung (Bag.).

MATTHAEA SANCTA Blume Mus. Bot. Lugd.-Bat. 2 (1852) 89, t. 10, var. **MINDANAOENSIS** Perk. in Engl. Pflanzenreich 49 (1911) 18.

Mindanao (Lanao), *Clemens* 233. In forests, altitude about 700 m.

Var. **VENULOSA** Perk. op. cit. 19.

Luzon (Laguna, Tayabas, Batangas), *F. B.* 7916 *Curran & Merritt*, 23810 *Mabesa*, 21534 *Tamesis*, *B. S.* 9751 *Robinson*, 19566 *Ramos*, *Quisumbing* 1345, *Gates* 6485. In forests, altitude 500 to 900 m. The first variety endemic; the second also in Borneo, the species in Java and Borneo.

MATTHAEA VIDALII Perk. in Engl. Bot. Jahrb. 45 (1911) 422, Pflanzenreich 49 (1911) 17.

Matthaea sancta Ceron Cat. Pl. Herb. Manila (1892) 141, non Blume.

Luzon (Camarines, Sorsogon, Panay), *Vidal* 3574 (Herb. Kew.), *Merrill Phil. Pl.* 1554 (as *M. sancta* var. *venulosa*), *B. S.* 30718 *Ramos & Edaño*. In forests at medium altitudes. Endemic.

Local name: Salapula (Bik.).

MATTHAEA WILLIAMSII Perk. in Engl. Bot. Jahrb. 45 (1911) 422, Pflanzenreich 49 (1911) 18.

Mindanao (Zamboanga), *Williams* 2430, *Merrill* 8169. In forests, altitude 350 to 1,000 m. Endemic.

LAURACEAE

1. CINNAMOMUM Tournefort

CINNAMOMUM BURMANNI Blume Bijdr. (1825) 569; Meissn. in DC. Prodr. 15¹ (1864) 17; F.-Vill. Novis. App. (1880) 179; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 115; Ceron Cat. Pl. Herb. Manila (1892) 142.

An introduced species, rare in cultivation. I have seen but a single Philippine specimen, from Nagcarlan, Laguna Province, Luzon. Java, Sumatra, reported also from southern China and from Japan, the last two records perhaps based on erroneously identified specimens, or perhaps on material from introduced plants.

Local name: Canéla (Sp.).

CINNAMOMUM INERS Reinw. ex Blume Bijdr. (1825) 570, Rumphia 1 (1835) 41, t. 17, 18; Meissn. in DC. Prodr. 15¹ (1864) 19; Gamble in Journ. As. Soc. Beng. 75¹ (1912) 76; F.-Vill. Novis. App. (1880) 180.

Mindanao (Lanao), Palawan, Tawitawi, *Clemens 951, 394, Elmer 10473, 12992, F. B. 28000 Cenabre, Baldemor, & Aduviso*. In forests up to 700 m altitude. Indo-China, Malay Peninsula, Sumatra, Java, Borneo.

Local name: Namog (Tagb.).

CINNAMOMUM MERCADOI Vidal Rev. Pl. Vasc. Filip. (1886) 224; Ceron Cat. Pl. Herb. Manila (1892) 142; Merr. in Philip. Bureau Forest. Bull. 1 (1903) 21, Philip. Journ. Sci. 1 (1906) Suppl. 56, Sp. Blancoanae (1918) 152; Elm. Leaf. Philip. Bot. 2 (1910) 704.

Laurus culilaban Blanco Fl. Filip. (1837) 315, ed. 2 (1845) 222, ed. 3, 2 (1878) 51, non Linn.

Laurus cassia Blanco op. cit. 317, 323, 53, non Linn.

Cinnamomum iners Vidal Sinopsis Atlas (1883) 36, t. 78, f. A (as var. *subvenosa* Vid.) non Reinw.

Cinnamomum pauciflorum F.-Vill. Novis. App. (1880) 179, non Nees.

Cinnamomum tamala F.-Vill. op. cit. 180, non T. Nees & Eberm.

Cinnamomum zeylanicum F.-Vill. op. cit. 179, non Nees.

Babuyan Islands and northern Luzon to Mindanao. Common in forests at low and medium altitudes, some forms ascending to 2,000 m. Endemic.

Local names: Kalíngad (Pamp.); kalíngag (Tag., Bag., S. L. Bis., Lan.); kalíngak (Tag.); kandoróma (Ilk.); kaníla (Ilk., Bik., Pang.); kanilau (Bik.); kaniñgag (S. L. Bis.); kariñganat (Neg.); kasiu (Ilk.); kulíuan (Neg.); makaliñgag (Tag.); marobo (S. L. Bis.); samiling (Tag.); similing (Tag.); ulíuan (Neg.).

CINNAMOMUM MINDANAENSE Elm. Leaf. Philip. Bot. 2 (1910) 705.

Mindanao (Surigao, Davao, Zamboanga), *Elmer 11105, Williams 2868, B. S. 16458 Reillo, F. B. 24311 Tecson*. In thickets and forests at low and medium altitudes. This is probably the species yielding the "cinnamon" exported from Mindanao in the early colonial period. Endemic.

Local names: Kaliñgag (Mbo.); kami (Bag.).

CINNAMOMUM MYRIANTHUM Merr. in Philip. Journ. Sci. 12 (1917) Bot. 125.

Luzon (Ilocos Norte), *B. S. 27485 Ramos*. In forests at low altitudes. Endemic.

Local name: Peling (Ilk.).

CINNAMOMUM SANDKUHLII Merr. in Philip. Journ. Sci. 12 (1917) Bot. 126.

Luzon (Ifugao, Benguet), *Sandkuhl 159, 310*. In forests, 1,400 to 2,000 m. Endemic.

CINNAMOMUM ZEYLANICUM Blume Bijdr. (1825) 568; Nees in Wall. Pl. As. Rar. 2 (1831) 74; Ceron Cat. Pl. Herb. Manila (1892) 142; Merr. Fl. Manila (1912) 210, Sp. Blancoanae (1918) 152.

Laurus cinnamomum Linn. Sp. Pl. (1752) 369; Blanco Fl. Filip. (1837) 319, ed. 2 (1845) 225, ed. 3, 2 (1878) 37.

Occasionally cultivated in gardens in Manila and other large towns. Introduced from India or Ceylon.

Local name: Canéla (Sp.).

EXCLUDED SPECIES

CINNAMOMUM JAVANICUM Blume; F.-Vill. Novis. App. (1880) 179.

CINNAMOMUM SINTOK Blume; F.-Vill. l. c.

CINNAMOMUM XANTHONEURUM Blume; F.-Vill. op. cit. 180.

CINNAMOMUM CAMPHORATUM Blume; F.-Vill. op. cit. 179.

CINNAMOMUM CULILAWAN Blume; F.-Vill. l. c.

CINNAMOMUM CAMPHORATUM (Linn.) T. Nees & Eberm.

The camphor tree occurs as a recently introduced species in Manila (rare) and in Baguio. It does not thrive in the regions in which it has been planted.

2. PERSEA Plumier

PERSEA AMERICANA Mill. Gard. Dict. ed. 8 (1768); Blake in Journ. Wash. Acad. Sci. 10 (1920) 12, f. 1, A; Merr. Fl. Manila (1912) 211, Sp. Blancoanae (1918) 153.

Laurus persea Linn. Sp. Pl. (1753) 370; Blanco Fl. Filip. ed. 2 (1845) 224, ed. 3, 2 (1878) 56.

Persea gratissima Gaertn. Fruct. 3 (1805-07) 222; Miq. Fl. Ind. Bat. 1¹ (1858) 913; Meisn. in DC. Prodr. 15¹ (1864) 52; F.-Vill. Novis. App. (1880) 180; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 73.

Aquacate Kamel in Ray Hist. Pl. 3 (1704) App. 59.

Introduced from tropical America, occasional in cultivation. Originally introduced before the end of the sixteenth century. The avocado.

PERSEA PYRIFORMIS Elm. Leaf. Philip. Bot. 8 (1915) 2727.

Samar, Mindanao (Surigao, Agusan, Zamboanga), *Elmer 13311, Merrill Phil. Pl. 1667, as Beilschmiedia, Wenzel 1907, Piper 294, 327, F. B. 24955 Franco, 22744 Lasqueti, 23397 Ponce*. In forests at low altitudes, ascending to 300 m. Endemic.

Local names: Hotot (Mbo.); tangkankayau (C. Bis.).

3. PHOEBE Nees

PHOEBE GLABRIFOLIA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 140.

Samar, Basilan, *B. S.* 17552 Ramos, 16159, 16158 Reillo, *F. B.* 18894 Miranda. In primary forests at low or medium altitudes. Endemic.

PHOEBE STERCULIOIDES (Elm.) Merr. in Philip. Journ. Sci. 4 (1909) Bot. 262; Elm. Leaf. Philip. Bot. 2 (1910) 727.

Persea sterculioides Elm. Leaf. Philip. Bot. 1 (1908) 295.

Luzon (Isabela, Laguna, Tayabas), Mindoro, Samar, Leyte, Panay, Negros, Mindanao. In primary forests at low and medium altitudes, represented by about 50 individual collections. Endemic, if really distinct from *P. macrophylla* Blume.

Local names: Alimbabaud (Mand.); banogan (S. L. Bis.); batikuling (Tag.); boga (Bag.); bugo (Lan.); dulauan-ñgisit (Ibn.); hindang (S. L. Bis.); kaburo (Tag.); kachepu (Buk.); hindang-magtalísai (S. L. Bis.); magbuabang (C. Bis.); margadilau (Tag.).

4. MACHILUS Nees

MACHILUS CURRANII Merr. in Philip. Journ. Sci. 5 (1910) Bot. 349.

Luzon (Benguet), *F. B.* 18080, 18054 Curran, Merritt, & Zschokke. In the mossy forest on Mt. Pulog, altitude 2,400 to 2,700 m. Endemic.

MACHILUS NERVOSA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 262.

Luzon (Benguet), *F. B.* 10846 Curran, 18009 Merritt. In the mossy forest on Mt. Ugo, altitude 2,000 m. Endemic.

MACHILUS PHILIPPINENSIS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 56.

Persea philippinensis Elm. Leaf. Philip. Bot. 2 (1908) 384.

Luzon (Bontoc, Bataan, Laguna, Batangas, Tayabas), Mindoro, Whitford 1220, 1139, Elmer 7642, 8184, 17485, Loher 6697, Merrill 8617, *B. S.* 31854 Santos, 39470 Ramos, *F. B.* 2793 Meyer, 23553 Mabesa. On ridges in forests, altitude 800 to 2,300 m. Endemic.

Local names: Margapáli (Tag.); margapáli-kolilisiao (Tag.).

5. NOTHAPHOEBE Blume

NOTHAPHOEBE MALABONGA (Blanco) Merr. in Philip. Journ. Sci. 9 (1914) Bot. 358, *Sp. Blancoanae* (1918) 153.

Ajovea malabonga Blanco Fl. Filip. (1837) 233; Meissn. in DC. Prodr. 15¹ (1864) 259.

Laurus hexandra Blanco op. cit. ed. 2 (1845) 222, ed. 3, 2 (1878) 52, non Willd.

Iteadaphne confusa F.-Vill. Novis. App. (1880) 181, non Blume.

Luzon (Cagayan, Ilocos Sur, Bulacan, Rizal, Laguna, Camarines), Mindoro, Leyte, Panay, Negros, Mindanao, Merrill 1068, *Sp. Blancoanae* 121, *F. B.* 17906 Barros, 1876 Ahern's collector, 20486 Villamil, 22085 Calacosa, 24919 Mabesa, 21447, 22637 Alvarez, 4039, 4103, 6742, 9891 Merritt. In forests at low and medium altitudes. Endemic unless referable to the Malayan *N. umbelliflora* Blume.

Local names: Anagáp (Tag.); babúlo (Tag.); bagarapíli (Tag.); dúlauan (Ibn.); kabulo (Tag.); magariláu (Tag.); malabúñga (Tag.); maláya (Bik.); margapáli (Tag.).

NOTHAPHOEBE LEYTENSIS (Elm.) comb. nov.

Persea leytensis Elm. Leaf. Philip. Bot. 2 (1908) 383.

Persea surigaoensis Elm. Leaf. Philip. Bot. 8 (1915) 2728.

Samar, Leyte, Panay, Dinagat, Mindanao (Surigao), *Elmer* 7195, 14027, *Merrill Phil. Pl.* 6555 as *Cryptocarya*, *Ahern* 477, 520, 695, *Wenzel* 1908, *B. S.* 30902 *Ramos & Edaño*. In forests at low altitudes. Endemic.

Local names: Hindang (C. Bis.); kubikúbi (C. Bis.).

6. EUSIDEROXYLON Teysmann and Binnendijk**EUSIDEROXYLON ZWAGERI** Teysm. & Binn. in Nat. Tijdschr. Nederl.

Ind. 25 (1863) 292, 2 plates; *Foxw.* in Philip. Journ. Sci. 6 (1911) Bot. 179.

Bihania borneensis Meisn. in DC. Prodr. 16¹ (1864) 96.

Eusideroxylon borneense F.-Vill. Novis. App. (1880) 179, excl. syn. Blanco.

Sulu Archipelago (Tawitawi), *F. B.* 23874 *Ferraris*, 20813 *Ferraris & Stadtmüller*, 22522 *Klemme*, *B. S.* 10833 *Foxworthy*, 36302 *Yates*. In primary forests at low altitudes. A monotypic genus, otherwise known from Borneo, Sumatra, Bangka, and Billiton.

Local names: Bilíran (Sul.); tambúlian (Sul.).

7. ACTINODAPHNE Nees**ACTINODAPHNE BICOLOR** (Merr.) comb. nov.

Litsea bicolor Merr. in Philip. Journ. Sci. 4 (1909) Bot. 259; Elm. Leaf. Philip. Bot. 8 (1915) 2722.

Mindanao (Surigao, Agusan), *Bolster* 318, *Elmer* 13961. In forests, altitude 200 to 900 m. Endemic.

The type of *Litsea bicolor* Elm. is identical with that of *L. bicolor* Merr., the latter name having priority by five years.

Local names: Hannag (Mbo.); hindang (C. Bis.).

ACTINODAPHNE CONFERTA (Merr.) comb. nov.

Litsea conferta Merr. in Philip. Journ. Sci. 11 (1916) Bot. 10.

Luzon (Sorsogon), Surigao, *B. S.* 23348 *Ramos*, 34692 *Ramos & Pascasio*, *Elmer* 15994 as *Neolitsea copelandii* Elm. In forests at medium altitudes. Endemic.

ACTINODAPHNE DOLICHOPHYLLA (Merr.) comb. nov.

Litsea dolichophylla Merr. in Philip. Journ. Sci. 12 (1917) Bot. 134.

Samar, Leyte, Panay, Mindanao (Surigao), *B. S.* 17540 *Ramos*, 34527 *Ramos & Pascasio*, 31178 *Ramos & Edaño*, *Wenzel* 1604. In primary forests at low altitudes. Endemic.

Local name: Pipi (S. L. Bis.).

Closely allied to the Malayan *Actinodaphne macrophylla* Nees from which *A. maingayi* Hook. f. can scarcely be distinguished.

ACTINODAPHNE SAMARENSIS (Merr.) comb. nov.

Litsea samarensis Merr. in Philip. Journ. Sci. 12 (1917) Bot. 138.

Luzon (Cagayan), Catanduanes, Samar, *B. S.* 17541, 30469 *Ramos*, *F. B.* 18502 *Alvarez*. In forests at low or medium altitudes. Endemic.

ACTINODAPHNE TAYABENSIS (Elm.) comb. nov.

Litsea tayabensis Elm. Leaf. Philip. Bot. 2 (1908) 380, (1909) 716.

Luzon (Laguna, Tayabas, Sorsogon), Mindoro, Negros, Mindanao (Davao), *Elmer* 9144, 15001, 11526, *Merrill Phil. Pl.* 1105, *B. S.* 29211 *Ramos & Edaño*, 23843, 39495 *Ramos, F. B.* 22496 *Mariano*, 4093 *Merritt*. In forests at low and medium altitudes. Endemic.

Local names: Anagás (P. Bis.); bohian (C. Bis.); gibuaya (Tag.); mabaráan (Bag.); maladugúan (P. Bis.).

8. NEOLITSEA (Bentham) Merrill**NEOLITSEA APOENSIS** Elm. Leaf. Philip. Bot. 2 (1909) 727.

Mindanao (Davao, Agusan), *Elmer* 11255, 13849. In primary forests, altitude about 1,050 m. Endemic.

Local names: Mabaráan (Bag.); sinagodsod (Mbo.).

NEOLITSEA INCANA Elm. Leaf. Philip. Bot. 5 (1913) 1794.

Palawan, *Elmer* 13184, *F. B.* 3862 *Curran*. In dense thickets at the summit of Mt. Pulgar, altitude about 1,300 m. Endemic.

NEOLITSEA INTERMEDIA Elm. Leaf. Philip. Bot. 2 (1908) 382.

Luzon (Benguet, Rizal), *Elmer* 8832, *F. B.* 2993 *Ahern's collector*. In forests and on ridges at medium altitudes. Endemic.

Local name: Basog (Ig.).

This is not certainly distinct from *N. vidalii* Merr. The second specimen cited, however, has fruits radically different from the latter species.

NEOLITSEA LANCEOLATA Merr. in Philip. Journ. Sci. 14 (1919) 397.

Luzon (Tayabas, east coast), Catanduanes, *B. S.* 30231 *Ramos*, 28860 *Ramos & Edaño*. In the mossy forest, probably at or above an altitude of 900 m. Endemic.

NEOLITSEA MEGACARPA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 349.

Luzon (Bontoc, Benguet), *F. B.* 18110, 18144 *Curran, Merritt, & Zschokke*, *B. S.* 8348 *McGregor*, 5709 *Ramos*, 31763 *Santos, Lohr* 4521, *Merrill* 4761. In the mossy forest, altitude 2,200 to 2,400 m. Endemic.

Local names: Balakauin (Ig.); dundumosen (Ig.).

NEOLITSEA MICROPHYLLA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 57, 5 (1910) Bot. 349.

Luzon (Benguet, Bontoc, Bataan), Mindoro, *Elmer* 6905, *F. B.* 8633 *Merritt*, 18071 *Curran, Merritt, & Zschokke*. In the mossy forest, altitude 1,200 to 2,400 m. Endemic.

NEOLITSEA PAUCINERVIA Merr. in Philip. Journ. Sci. 14 (1919) 398.

Luzon (Camarines, Sorsogon), *B. S.* 23316 *Ramos*, 33920 *Ramos & Edaño*, *Elmer* 15752 as *N. vulcanica* Elm. In the mossy forest at or above 1,000 m altitude. Endemic.

Closely allied to *N. villosa* Merr.

NEOLITSEA VIDALII Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 56; Elm. Leaf. Philip. Bot. 2 (1910) 726.

Litsea verticillata Rev. Pl. Vasc. Filip. (1886) 226; *Ceron Cat. Pl. Herb. Manila* (1892) 143, non Hance.

Luzon (Cagayan, Bataan, Rizal, Laguna, Tayabas, Camarines, Sorsogon), Mindoro, Guimaras, Mindanao, Basilan. In primary forests at low and medium altitudes, represented by over 30 individual collections. Endemic.

Local names: Batikuling (Tag.); lanat (P. Bis.); maráng (Tag.); monpon (Tag.); patugau (Sub.); poli (Neg.); puso-puso (Tag.); puso-púsong-hula (Tag.); puso-púsong-laláki (Tag.); salinṡguak (P. Bis.).

NEOLITSEA VILLOSA (Blume) Merr. in Philip. Journ. Sci. 4 (1909) Bot. 261, 5 (1910) Bot. 329; Elm. Leaf. Philip. Bot. 2 (1910) 726.

Litsea villosa Blume Mus. Bot. Lugd.-Bat. 1 (1851) 349; F.-Vill. Novis. App. (1880) 181; Vidal Sinopsis Atlas (1883) 37, t. 78, f. E, Rev. Pl. Vasc. Filip. (1886) 226.

Litsea cinnamomea F.-Vill. Novis. App. (1880) 181; Vidal Rev. Pl. Vasc. Filip. (1886) 226, non Blume.

Neolitsea zeylanica Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 57, 2 (1907) Bot. 274, quoad spp. cit.

Luzon (Ilocos Norte, Abra, Benguet, Bataan, Zambales, Pampanga, Laguna, Tayabas, Batangas), Mindoro, Leyte, Mindanao, represented by more than 50 individual collections. In the mossy forest, altitude 900 to 2,000 m. Malay Peninsula to the Moluccas.

Local names: Bohian (C. Bis.); klamagan (Buk.); mabaráan (Bag.).

NEOLITSEA ZEYLANICA (Nees) Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 57, 2 (1907) Bot. 274; Gamble in Journ. As. Soc. Bengal 75¹ (1912) 189.

Litsea zeylanica Nees in Amoen. Bot. Bonn. 1 (1823) 58, t. 5.

Tetradenia zeylanica Nees in Wall. Pl. As. Rar. 2 (1831) 64, 3 (1832) 30.

Luzon (Zambales, Batangas), Leyte, Merrill Phil. Pl. 1907 (as *N. villosa*), B. S. 15369 Ramos. In forests at medium altitudes. India, through Malaya to tropical Australia.

9. LITSEA Lamarek

LITSEA ABRAENSIS Merr. in Philip. Journ. Sci. 12 (1917) Bot. 132.

Luzon (Abra), B. S. 27048 Ramos. On forested slopes at medium altitudes. Endemic.

LITSEA ALBAYANA Vidal Rev. Pl. Vasc. Filip. (1886) 227; Ceron Cat. Pl. Herb. Manila (1892) 143; Merr. in Philip. Journ. Sci. 12 (1917) Bot. 140.

Lindera reticulata F.-Vill. Novis. App. (1880) 182; Vidal Phan. Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 229, quoad Philip., non *Aperula reticulata* Blume.

Aperula reticulata Meisn. in DC. Prodr. 15¹ (1864) 243, quoad Cuming 894.

Litsea caesifolia Elm. Leaf. Philip. Bot. 2 (1910) 722.

Luzon (Bataan, Laguna, Camarines, Albay), Samar, Leyte, Mindanao, F. B. 26590 Sandique, 15148 Tarrosa, 7319 Everett, 27702 Angeles & Soriano, 27473 De Mesa, 25001 Mabesa, 14271 Aguilar, B. S. 16477 Reillo, 17518 Ramos, Ahern 553, Elmer 13414, 10853, 17911, Baker 3379, 3297, Wenzel 1028, 928, 1035, 1283, 768, 804, 360. In primary forests at low and medium altitudes, ascending to 900 m. Endemic.

Local names: Aráhan (Bik.); bakúnib (Bag.); batikulín (Tag.); dilakmanók (Mbo.); mabaraan (Bag.); otag (Mbo.); sala (S. L. Bis.).

LITSEA AMPLA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 133.

Luzon (Isabela, Tayabas, Camarines), Samar, Mindanao (Lanao, Zamboanga, Misamis), Basilan, *Merrill Phil. Pl. 1654, Sablaya 107, B. S. 24378, 22103 Ramos, 37051 Ramos & Edaño, F. B. 20866 Bernardo, 11883 Miranda, 17891 Rafael*. In primary forests at low and medium altitudes. Endemic.

Local name: Maráng (Tag.).

LITSEA ANOMALA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 12.

Luzon (Sorsogon), *B. S. 23652 Ramos*. In primary forests at medium altitudes. Endemic.

LITSEA BARACTANENSIS Elm. Leaf. Philip. Bot. 2 (1910) 720.

Batan Islands, Luzon (Isabela, Cagayan, Nueva Ecija, Union, Rizal), Dumarán, Ticao, Masbate, Mindanao (Cotabato, Davao), *Elmer 10993, F. B. 14934 Bernardo, 24228 Villanueva, 12522 Rosenbluth, 26638 Velasco, B. S. 21630 Escritor, 11697 Robinson, 13533, 4658 Ramos, 3585, 3717 Fénix*. In forests up to 500 m altitude. Endemic.

This has all the appearance of being but a nearly glabrous form of *L. glutinosa* C. B. Rob.

Local names: Puso-púso (Tag.); sab-lót (Ilk.); tioh (Bag.).

LITSEA BARURINGENSIS Elm. Leaf. Philip. Bot. 2 (1910) 719.

Mindanao (Davao), *Elmer 11736, 10738*. On forested slopes, altitude about 1,050 m. Endemic.

Local name: Mabaraan (Bag.).

LITSEA CINEREA Elm. in herb. comb. nov.

Actinodaphne cinerea Elm. Leaf. Philip. Bot. 5 (1913) 1795.

Palawan, *Elmer 12947*. On forested ridges, altitude about 600 m. Endemic.

LITSEA EUPHLEBIA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 135.

Luzon (Laguna), *B. S. 13523, 16633 Ramos, F. B. 15360 Tamesis*. In primary forests at low and medium altitudes. Endemic.

Local names: Maráng (Tag.); matang-usá (Tag.).

LITSEA FULVA (Blume) F.-Vill. Novis. App. (1880) 181; Vidal Phan.

Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 226; Elm.

Leaf. Philip. Bot. 2 (1910) 718.

Tetranthera fulva Blume Mus. Bot. Lugd.-Bat. 1 (1851) 377; Meisn. in DC. Prodr. 15¹ (1864) 195.

Luzon (Ilocos Norte, Pangasinan, Zambales, Nueva Ecija, Bataan, Rizal, Laguna, Batangas, Sorsogon), Mindoro, Palawan, Sibuyan, Leyte, Negros, Mindanao, *Cuming 1620, Elmer 6808, 7106, 17959, 15348, 17195, 12118, 13939, 15463, Whitford 271, Merrill 3891, 9180, Wenzel 1558, 163, F. B. 1453 Ahern's collector, 1810 Borden, 26429 Miranda, 3002 Meyer, 134 Barnes, B. S. 27151, 32876, 32769, 7744, 13395, 24077 Ramos, 29841 Fénix, 34665, 26849 Edaño, 38599 Ramos & Edaño, 12300 Foxworthy, 12462 McGregor*. In primary forests at low and medium altitudes, ascending to 900 m. Sumatra, Java, and probably other parts of Malaya.

Local name: Limbahan (Mbo.).

LITSEA GARCIAE Vidal Rev. Pl. Vasc. Filip. (1886) 228; Ceron Cat. Pl. Herb. Manila (1892) 143.

Litsea griseola Elm. Leaf. Philip. Bot. 2 (1908) 382, (1909) 718.

Litsea macrophylla Elm. Leaf. Philip. Bot. 8 (1915) 2723.

Luzon (Laguna, Tayabas, Camarines, Albay, Sorsogon), Mindoro, Samar, Leyte, Mindanao (Agusan, Davao, Cotabato), *Elmer* 9242, 16744, 15872, 13316, 17965, 15606, *McGregor* 159, *Merrill* 1798, *F. B.* 8036 *Curran & Merritt*, 11913 *Tamesis*, 21404 *Villamil*, 17635 *Curran*, 6803, 6893 *Merritt*, 27502 *De Mesa*, 26667 *Rola*, *B. S.* 17588, 20465 *Ramos*. In forests at low and medium altitudes. Endemic, unless, as Gamble thinks, *Journ. As. Soc. Bengal*, 75¹ (1912) 178, it is referable to the Malayan *L. sebifera* Blume.

Local names: Bagnólo (Tag.); bañgúlo (Tag.); batikulíng-maráng (Tag.); bouro (Mang.); kupa (Man., Mag., Bag.); pípai (Mbo.); pípi (Bik., S. L. Bis.).

LITSEA GLUTINOSA (Lour.) C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 321; Merr. Fl. Manila (1912) 210, Sp. Blancoanae (1918) 153, 154.

Sebifera glutinosa Lour. Fl. Cochinch. (1790) 638; Blanco Fl. Filip. (1837) 819, ed. 2 (1845) 566, ed. 3, 3 (1879) 234, t. 360.

Tetranthera laurifolia Jacq. Hort. Schoenbr. 1 (1797) 59; Meisn. in DC. Prodr. 15¹ (1864) 178 (incl. *multiflora* Meisn. et var. *citrifolia* Meisn.).

Litsea chinensis Lam. Encycl. 3 (1791) 574; Novis. App. (1880) 180; Vidal Phan. Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 225.

Litsea littoralis F.-Vill. Novis. App. (1880) 180; Vidal Sinopsis Atlas (1883) 37, t. 78, f. D.

Tetranthera littoralis Blume Mus. Bot. Lugd.-Bat. 1 (1851) 375; Meisn. in DC. Prodr. 15¹ (1864) 180.

Sebifera balongai Blanco Fl. Filip. (1837) 820, ed. 2 (1845) 567, ed. 3, 3 (1879) 235.

Litsea tersa Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 57, non *Glabraria tersa* Linn.

Litsea sebifera Pers. Syn. 2 (1807) 4.

Tetranthera laurifolia Jacq. var. *citrifolia* Meisn., var. *multiflora* Meisn. et var. *racemoso-umbellata* Meisn. in DC. Prodr. 15¹ (1864) 179.

Throughout the Philippines, chiefly in secondary forests at low and medium altitudes; represented by more than 90 individual collections. India to southern China, through Malaya to tropical Australia.

Local names: Balañgánañ (P. Bis.); balóngai (Tag.); batikulíng (Tag.); lutus (Tag.); daláuen-negro (Ibn.); duñgúl (Ibn.); iñgas (Tag.); lauut (Bik.); lormañgog (P. Bis.); mapípi (Bik.); maráng (Tag.) olos-olos (Pang.); parasablút (Ilk.); poríkit (Tag.); puñgo (Tagb.); puso-púso (Ibn., Tag., Pamp., P. Bis.); sab-lót (Ibn., Ilk.); sapuan (Ig.); si-blót (Ibn.); tagutugan (Bik.); tayapok (Mbo.); tilam (Tag.); tubhus (Iv.).

LITSEA HUTCHINSONII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 259.

Balabac, Mindanao, Basilan, *F. B. 9148 Hutchinson, 17960, 20275 Miranda, 24050 Acuña, 21853 Villamil, B. S. 435 Mangubat*. In forests at low altitudes. Endemic.

Local names: Asasalá (Sul.); bakan (Buk.); boríngau (Tagb.); dulagin (Sul.); sua-suá (Lan.).

LITSEA ILOCANA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 132.

Luzon (Ilocos Sur), *F. B. 25485 Paraíso*. In forests, altitude about 450 m. Endemic.

LITSEA LEYTENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 272.

Litsea obtusata Vidal Rev. Pl. Vasc. Filip. (1886) 226; Ceron Cat. Pl. Herb. Manila (1892) 143, non F.-Vill.

Luzon (Bataan, Tayabas, Sorsogon), Leyte, Negros, *Wenzel 708, 911, 1092, F. B. 27371 Guieb, 24020 Duldulao, 24751 Manuel, B. S. 23669 Ramos, Merrill Sp. Blancoanae 1006, Elmer 10389, Vidal 524*. In forests at low altitudes. Endemic.

This may prove to be *Olex baticulin* Blanco.

Local names: Balbanéra (Tag.); batikulíng (Tag., Bik.).

LITSEA LUZONICA (Blume) F.-Vill. Novis. App. (1880) 181; Vidal Phan. Cuming. Philip. (1885) 139, Rev. Pl. Vasc. Filip. (1886) 226; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 57.

Tetranthera luzonica Blume Mus. Bot. Lugd.-Bat. 1 (1851) 377; Miq.

Fl. Ind. Bat. 1¹ (1858) 947; Meisn. in DC. Prodr. 15¹ (1864) 195.

Northern Luzon (Cagayan) to Palawan and Mindanao, in most or all islands and provinces; represented by more than 100 individual collections. In primary forests at low and medium altitudes. Endemic.

This interpretation is largely based on *Cuming 1585* and *1486*, referred here by Meisner. Blume's actual type was a specimen collected by Perrottet; Foxworthy, who examined it, notes that *Elmer 7699* and *9133* agree with it; they do not very closely match Cuming's specimens, so that perhaps more than one species is represented.

Local names: Duñgoi (Tag.); malasíko (Tag.); pamalitun (Pang.); pamayabásen (Ilk.); tambaláu (Tag.).

LITSEA MACGREGORII Merr. in Philip. Journ. Sci. 12 (1917) Bot. 136.

Biliran, *B. S. 18493 McGregor*. In primary forests, altitude about 200 m. Endemic.

LITSEA MEMBRANACEA Elm. Leaf. Philip. Bot. 2 (1908) 380, (1910) 716.

Luzon (Benguet, Sorsogon), Leyte, Mindanao (Lanao), *Elmer 8961, 15278, Clemens 420*. In forests at medium altitudes. Endemic.

Local names: Marabáan (Bag.); tauako (Ig.).

LITSEA MICRANTHA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 136.

Samar, Mindanao (Misamis, Lanao), *B. S. 24464, 24344, 17505 Ramos, F. B. 25215 Alvarez, 4772 Mearns & Hutchinson, 17989 Miranda*. In forests at low and medium altitudes. Endemic.

Local name: Yau-yau (S. L. Bis.).

LITSEA MICROPHYLLA (Elm.) comb. nov.

Actinodaphne microphylla Elm. Leaf. Philip. Bot. 2 (1908) 375.

Negros, *Elmer 10178*. On exposed ridges, altitude about 1,000 m. Endemic.

LITSEA OBLONGIFOLIA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 137.

Luzon (Cagayan), *B. S. 14518 Ramos*. In forests at low altitudes. Endemic.

LITSEA ODORIFERA Valetton in Ic. Bogor. 3 (1909) t. 276; Merr. in Philip. Journ. Sci. 20 (1922) 386.

Palawan, *F. B. 27884 Cenabre, Baldemor, & Aduviso*. On forested ridges, altitude 150 m. Sumatra, Java, Borneo.

LITSEA PERFULVA Elm. Leaf. Philip. Bot. 2 (1910) 723.

Mindanao (Davao), *Elmer 10691*. In primary forests, altitude about 1,100 m. Endemic.

Local name: Baga (Bag.).

LITSEA PERROTTETII (Blume) F.-Vill. Novis. App. (1880) 180; Vidal Sinopsis Atlas (1883) 36, t. 78, f. C, Phan. Cuming. Philip. (1885) 139 (var. *cumingii* Vid., var. *subcordata* Vid.), Rev. Pl. Vasc. Filip. (1886) 225 (var. *parviflora* Vid., var. *villarii* Vid.); Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 57, 11 (1916) Bot. 271, Fl. Manila (1912) 210; Elm. Leaf. Philip. Bot. 2 (1910) 715.

Tetranthera perrottetii Blume Mus. Bot. Lugd.-Bat. 1 (1851) 384; Meissn. in DC. Prodr. 15¹ (1864) 196.

Northern Luzon (Cagayan) to Palawan and Mindanao, in most or all islands and provinces. Common chiefly in secondary forests at low and medium altitudes, represented by more than 90 individual collections. Celebes, Moluccas.

Local names: Anagép (Gad.); baáken (Ilk.); bákán (Tag., S. L. Bis., P. Bis.); batikulíng (Tag., Ibn.); batikulín-bálud (Tag.); índang (Bis.); kalaitik (Mang.); katiel (Bag.); kubílan (Ig.); magilik (Tag.); mala-bákán (Ilk.); marabái (Tagb.); maráng (Tag.); salamúñgai (Bik.); sibíglon (S. L. Bis.).

LITSEA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 260; Elm. Leaf. Philip. Bot. 2 (1910) 717.

Luzon (Bataan, Tayabas), Mindoro, Sibuyan, Catanduanes, Samar, Negros, Leyte, *F. B. 7503 Curran, 13629 Curran & Foxworthy, 27369 Sulit, 1794, 1363 Borden, 3171 Ahern's collector, 6161 Merritt, B. S. 30514, 39592 Ramos, Williams 619, Whitford 472, 1413*. In primary forests at low and medium altitudes. Endemic.

Local names: Arahan (S. L. Bis.); bakan (Bik.); balilad (P. Bis.); batsan (Tag.); hindang (S. L. Bis.); maráng (Tag.).

LITSEA PLATEAEFOLIA Elm. Leaf. Philip. Bot. 2 (1908) Bot. 377.

Negros, *Elmer 9921*. In forests along streams, altitude about 750 m. Endemic.

Local name: Bakan-ihalas (C. Bis.).

LITSEA QUERCOIDES Elm. Leaf. Philip. Bot. 2 (1908) 378, (1910) 717.

Litsea sorsogonensis Merr. in Philip. Journ. Sci. 11 (1916) Bot. 11.

Luzon (Sorsogon), Leyte, Negros, Mindanao (Lanao), *Elmer* 10329, 9961, 15400, 16067, *Wenzel* 1144, 884, *Clemens* 954, *B. S.* 23332, 23678 *Ramos*. In primary forests, altitude 700 to 1,200 m. Endemic.

Local names: Bohían (C. Bis.); mabaráan (Bag.).

LITSEA SEGREGATA Elm. Leaf. Philip. Bot. 2 (1910) Bot. 721.

Mindanao (Davao), *Elmer* 10534. In primary forests, altitude about 1,000 m. Endemic.

Local name: Mabaráan (Bag.).

LITSEA SIBUYANENSIS Elm. Leaf. Philip. Bot. 2 (1910) 724.

Sibuyan, *Elmer* 12536. In forests along streams, altitude about 225 m. Endemic.

LITSEA URDANETENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2724.

Luzon (Tayabas, Sorsogon), Mindanao (Agusan, Surigao), *Elmer* 13427, 18380, *Wenzel* 1903, *B. S.* 28492 *Ramos & Edaño*. In primary forests at low altitudes. Endemic.

Local name: Dilak-manók (Mbo.).

LITSEA VANOVERBERGHII Merr. in Philip. Journ. Sci. 12 (1917) Bot. 139.

Luzon (Ilocos Norte, Bontoc), *Vanoverbergh* 1737, *B. S.* 33331 *Ramos*. In forests, altitude up to 1,700 m. Endemic.

LITSEA VELUTINA Elm. Leaf. Philip. Bot. 8 (1915) 2726.

Mindanao (Agusan), *Elmer* 14189. In forests, altitude about 1,500 m. Endemic.

Local name: Sung-sung (Mbo.).

LITSEA WENZELII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 358.

Leyte, *Wenzel* 626. In forests, altitude about 500 m; perhaps too close to *L. luzonica* F.-Vill. Endemic.

LITSEA WHITFORDII nom. nov.

Actinodaphne philippinensis Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 192, non *Litsea philippinensis* Merr.

Mindoro, Leyte, *Whitford* 1476, 1416, *Elmer* 7323, *F. B.* 3667 *Merritt*. In forests at low altitudes. Endemic.

Local name: Bakan (Tag.).

DOUBTFUL AND EXCLUDED SPECIES

LITSEA ANGULATA Blume; F.-Vill. Novis. App. (1880) 181.

LITSEA BRACHYSTACHYA (Blume) F.-Vill. op. cit. 180.

LITSEA CALONEURA (Miq.) F.-Vill. op. cit. 181.

LITSEA CORDIFOLIA (Meisn.) F.-Vill. l. c.

LITSEA DIVERSIFOLIA Blume; F.-Vill. l. c.

LITSEA LANCIFOLIA (Roxb.) F.-Vill. l. c.

LITSEA LIGUSTRINA (Nees) F.-Vill. op. cit. 180.

LITSEA MAGNIFICA (Miq.) F.-Vill. op. cit. 181.

LITSEA OBTUSATA (Meisn.) F.-Vill. l. c.

LITSEA RUMPHII (Blume) F.-Vill. op. cit. 180.

OLAX BATICULIN Blanco Fl. Filip. ed. 2 (1845) 589, ed. 3, 1 (1877) 38;
Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 74, Sp. Blancoanae
(1918) 154.

F.-Villar reduced this to *Litsea obtusata* (Meisn.) F.-Vill. which is certainly a wrong disposition of it. It may prove to be the same as *Litsea albayana* Vidal or *L. leytenensis* Merr.

10. BEILSCHMIEDIA Nees

BEILSCHMIEDIA CAIROCAN Vid. Rev. Pl. Vasc. Filip. (1886) 223; Ceron
Cat. Pl. Herb. Manila (1892) 124.

Luzon (Cagayan, Isabela, Ilocos Norte, Ilocos Sur, Bontoc, Bataan, Rizal, Tayabas, Camarines), Mindoro, Masbate, Ticao, Leyte, Negros, Panay, Mindanao (Zamboanga), Vidal 519, Merrill 1947, 2599, Phil Pl. 1075, Ahern 127, 130, F. B. 17902 Barros, 15239, 17918, 13113, 20445, 23696 Bernardo, 27791 Franco, 7125 Klemme, 10392 Curran. In primary forests at low and medium altitudes. Endemic.

Local names: Anagép (Ibn., Ilk.); anago-ñgisi (Ibn.); anago-panagurán (Ibn.); baslayan (P. Bis.); daláueng (Ibn.); duláoen (Ibn.); duláuan (Ibn.); duláuen-négro (Ibn.); kairokan (Sbl., Tag.); kalangiking (Ilk.); kubi (C. Bis.); magariláo (Tag.); makatu (Neg.); malakadios (Tag.); nagusip (P. Bis.); níket (Ilk.); taki-na-gayang (Neg.).

BEILSCHMIEDIA GLOMERATA Merr. in Govt. Lab. Publ. (Philip.) 29
(1905) 15, Philip. Journ. Sci. 1 (1906) Suppl. 57.

Luzon (Ilocos Sur, Bataan, Laguna), F. B. 335 Barnes, 7104 Klemme, 23610 Paraíso, 6276 Curran, 20213, 23568 Villamil. In primary and secondary forests at low altitudes. Indo-China.

Local names: Mambúrau (Ilk.); tirukan (Tag.).

BEILSCHMIEDIA NERVOSA (Elm.) Merr. in Philip. Journ. Sci. 10 (1915)
Bot. 271.

Linociera nervosa Elm. Leaf. Philip. Bot. 5 (1913) 1652.

Beilschmiedia leytenensis Merr. in Philip. Journ. Sci. 9 (1914) Bot. 357.

Luzon (Sorsogon), Palawan, Samar, Leyte, Negros, Mindanao, Elmer 11833, 16927, 16794, 15593, Wenzel 501, Merrill 9452, F. B. 25057 Phasis, 11633 Whitford, 7277 Everett, 26263 Mallonga, 17955, 20581 Miranda, B. S. 24491 Ramos, 37041 Ramos & Edaña. In primary forests at low and medium altitudes, ascending to 1,200 m. Endemic, unless as Hallier f. states, Med. Rijks Herb. Leiden 35 (1918) 33, it is the same as the Indian *B. assamica* Meisn.; it may be the same as *B. praecox* K. & V. of Java.

Local names: Bagaoring (S. L. Bis.); ilak (Bag.); lalanig (Sub.).

BEILSCHMIEDIA NIGRIFOLIA Elm. Leaf. Philip. Bot. 5 (1913) 1797.

Palawan, Elmer 12834. In forests along streams, altitude about 300 m. Endemic; apparently very close to *B. cairocan* Vid.

BEILSCHMIEDIA PURPUREA Elm. Leaf. Philip. Bot. 2 (1910) 703.

Mindanao (Davao), *Elmer 11288*. In ravines, borders of forests, etc., altitude about 800 m. Endemic.

Local name: Magansira (Bag.).

11. DEHAASIA Blume

DEHAASIA TRIANDRA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 193; Elm. Leaf. Philip. Bot. 2 (1910) 711.

Luzon (Cagayan, Isabela, Nueva Vizcaya, Nueva Ecija, Rizal, Laguna, Tayabas, Camarines), Mindoro, Masbate, Sibuyan, Negros, Mindanao, *F. B. 3751, 8758, 4104, 6210, 3636, 3628 Merritt, 26109 Bernardo, 20636, 20879 Villamil, 25553 Vargas, 25503 Labitag, 22400 Alvarez, 2000 Ahern's collector, 18827 Franco, 22678 Curran, 28490 Cenabre, 27659 De Mesa, B. S. 13254 Ramos, Whitford 1459, 1565, Merrill 3068, Elmer 12201, 12221, Clemens 598*. In primary forests at low and medium altitudes. Borneo.

Local names: Anagas (P. Bis.); bañgúlo (Tag.); basláyan (P. Bis.); hauihan (P. Bis.); kabóro (P. Bis.); makúhai (Tag., P. Bis.); malaía (Bik.); malakadiós (Tag.); maníhai (Tag.); margapáli (Tag.); margariláu (Tag.); mompon (Bik.); paítan (Tag.); panuláuen (Ilk.); putian (P. Bis.); sikalig (Sul.).

EXCLUDED SPECIES

DEHAASIA BORNEENSIS (Meisn.) F.-Vill. Novis. App. (1880) 179.

DEHAASIA MEDIA Blume; F.-Vill. l. c.

12. CRYPTOCARYA R. Brown

CRYPTOCARYA ACUMINATA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 192, 2 (1907) Bot. 274.

Luzon (Isabela, Pampanga), Mindoro, *F. B. 3673, 4342 Merritt, 15474 Bernardo, B. S. 22442 Ramos, Whitford 1426*. In primary forests at low altitudes, ascending to 500 m. Endemic.

Local names: Karaskas (Mang.); malabakaoan (Tag.).

CRYPTOCARYA AFFINIS Merr. in Philip. Journ. Sci. 11 (1916) Bot. 9.

Luzon (Sorsogon), Dinagat, *B. S. 23338 Ramos, 35247 Ramos & Pascasio*. In primary forests at low altitudes. Endemic.

CRYPTOCARYA AMPLA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 258, Sp. Blancoanae (1918) 155.

? *Laurus martinicensis* Blanco Fl. Filip. (1837) 317, ed. 2 (1845) 223, ed. 3, 2 (1878) 35; Meisn. in DC. Prodr. 15¹ (1864) 259; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 73, non Jacq.

? *Beilschmiedia madang* F.-Vill. Novis. App. (1880) 179, non Blume.

Luzon (Ilocos Sur, Nueva Ecija, Pampanga, Rizal, Laguna), *F. B. 463, 397, 2438 Ahern's collector, 22423 Alvarez, 17707 Curran, 27090 Mabesa, 20876 Villamil*. In primary forests at low altitudes, ascending to 500 m. Endemic.

Local names: Bagariláu (Tag.); gariláu (Tag.); ñgarusáñgis (Ilk.).

CRYPTOCARYA BICOLOR Merr. in Philip. Journ. Sci. 4 (1909) Bot. 255.

Mindanao (Zamboanga), *F. B. 6578 Hutchinson*. In forests at low altitudes. Endemic.

Local names: Dugkátan (Sul.); dukátan (Sul.); masagkunadug (Sul.).

CRYPTOCARYA CAGAYANENSIS Merr. in Philip. Journ. Sci. 20 (1922) 385.

Luzon (Cagayan), *F. B.* 28440 *Ponce*. In forests at low altitudes. Endemic.

CRYPTOCARYA CALELANENSIS Elm. Leaf. Philip. Bot. 2 (1910) 707.

Panay, Mindanao (Davao), *Elmer* 11610, 10565, *F. B.* 27468 *De Mesa*, *B. S.* 35320 *Martelino & Edaño*. In forests, altitude 300 to 1,100 m. Endemic.

Local names: Mabaraan (Bag.); tamuku (Bag.).

CRYPTOCARYA CINNAMOMIFOLIA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 128.

Luzon (Nueva Ecija, Sorsogon), Samar, *B. S.* 26317 *Ramos & Edaño*, 24128 *Ramos*, *Elmer* 16749, 17395 as *C. trinervia* Elm. In primary forests at low altitudes. Endemic.

CRYPTOCARYA DENSIFLORA Blume Bijdr. (1825) 556; Koord. & Val. Bijdr. Boomsoort. Java 10 (1904) 213; Merr. in Philip. Journ. Sci. 14 (1919) 397.

Cryptocarya laevigata Elm. Leaf. Philip. Bot. 8 (1915) 2720, non Blume.

Panay, Negros, Mindanao (Agusan, Zamboanga, Lanao), *Elmer* 13604, *Clemens* 1001, *F. B.* 23666, 23887 *Hinolan*, *B. S.* 31317, 33435, 36813 *Ramos & Edaño*. In primary forests at low and medium altitudes, ascending to 1,050 m. Malay Peninsula, Java.

Local names: Bonai (Mbo.); buliñgog (Sub.); putian (P. Bis.).

CRYPTOCARYA EDAÑOII Merr. in Philip. Journ. Sci. 20 (1922) 384.

Mindanao (Zamboanga), *B. S.* 36706 *Ramos & Edaño*. In forests at low altitudes. Endemic.

CRYPTOCARYA ELLIPTIFOLIA Merr. in Philip. Journ. Sci. 14 (1919) 396.

Luzon (Camarines), Catanduanes, *B. S.* 30330 *Ramos*, 33537 *Ramos & Edaño*. In primary forests at low altitudes. Endemic.

CRYPTOCARYA EUPHLEBIA Merr. in Philip. Journ. Sci. 14 (1919) 396.

Catanduanes, Palawan, *B. S.* 30576 *Ramos*, *F. B.* 27866 *Cenabre, Gellidon, & Paras*. In primary forests at low and medium altitudes. Endemic.

Local name: Impaparen (Tagb.).

CRYPTOCARYA EVERETTII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 257; Elm. Leaf. Philip. Bot. 2 (1910) 706 (var. *navesii* Elm.).

Sibuyan, Polillo, Panay, Negros, Bucas Grande, Mindanao (Surigao), *F. B.* 4236, 7311, 4311, 7288 *Everett*, 23028 *Razon*, 19994 *Tamesis*, 7409 *Danao*, 23498 *Roque*, 21974 *Hinolan*, *B. S.* 34732, 35081 *Ramos & Pascasio*, 10774 *McGregor*, 35271, 35470, 35527 *Martelino & Edaño*, *Elmer* 12505. In primary forests at low and medium altitudes. Endemic.

Local names: Balit (P. Bis.); nilagasi (P. Bis.); paang-dayaga (C. Bis.); sayab (P. Bis.).

CRYPTOCARYA GLAUCA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 258.

Luzon (Pampanga, Bataan, Rizal, Laguna, Tayabas), *F. B. 2981 Ahern's collector, 17665 Curran, 18823 Pascual, 3046 Borden, Merrill 2337*. In primary forests at low and medium altitudes. Endemic.

Local names: Baliglarin (Tag.); kalai (Tag.).

CRYPTOCARYA GLAUCIPHYLLA Elm. Leaf. Philip. Bot. 2 (1910) 710.

Sibuyan, *Elmer 12287*. In forests along streams, altitude about 225 m. Endemic.

Local name: Magatopoi (P. Bis.).

CRYPTOCARYA GRIFFITHIANA Wight Ic. (1852) *t. 1830*; Merr. in Philip. Journ. Sci. 12 (1917) Bot. 131.

Mindanao (Lanao), *F. B. 23179 Agama*. In forests at low or medium altitudes. Tenasserim, Malay Peninsula, Singapore.

CRYPTOCARYA ILOCANA Vidal Rev. Pl. Vasc. Filip. (1886) 223; Ceron Cat. Pl. Herb. Manila (1892) 141.

Luzon (Cagayan, Ilocos Norte, Laguna), *Vidal 1684, B. S. 7646, 17390 Ramos, F. B. 23237 Barros, 18432, 18424 Alvarez, 26895 Bernardo, 28298 Velasco*. In forests at low altitudes. Endemic.

Local names: Balañgusan-á-laláki (Ilk.); kamigai (Ilk.); marakásim (Ilk.); pañganauan (Neg.); parappá (Ibn.).

CRYPTOCARYA INTERMEDIA Elm. Leaf. Philip. Bot. 8 (1915) 2719.

Mindanao (Agusan), *Elmer 13648*. In primary forests, altitude about 1,200 m. Endemic.

Local name: Maligitingmata (Mbo.).

CRYPTOCARYA LANCEOLATA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 127.

Luzon (Ilocos Norte, Apayao, Union), *F. B. 25098 Paraíso, 25105 Peña, B. S. 28049 Fénix*. In forests at low altitudes. Endemic.

Local name: Aníngat (Ilk.).

CRYPTOCARYA LAURIFLORA (Blanco) Merr. in Philip. Journ. Sci. 4 (1909) Bot. 254, *Sp. Blancoanae* (1918) 154.

Salgada lauriflora Blanco Fl. Filip. ed. 2 (1845) 221, ed. 3, 2 (1878) 50.

Eusideroxylon borneense F.-Vill. Novis. App. (1880) 179 quoad syn. Blanco.

Cryptocarya luzoniensis Vidal Rev. Pl. Vasc. Filip. (1886) 222; Ceron Cat. Pl. Herb. Manila (1892) 141; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 58.

Luzon (Cagayan, Isabela, Ilocos Norte, Ilocos Sur, Nueva Ecija, Bataan, Rizal, Laguna, Batangas, Tayabas, Camarines), Mindoro, Palawan, Samar, *Whitford 1050, 1043, Merrill Sp. Blancoanae 56, B. S. 13382, 20563 Ramos, F. B. 20248 Franco, 27189 Udasco, 6274 Curran, 20875 Villamil*. In primary forests at low and medium altitudes. Endemic.

Local names: Baligtárin (Tag.); bániakao (Ibn.); lámot (Ilk.); lipotégubat (Bik.); mala-isao (S. L. Bis.).

CRYPTOCARYA MINDANAENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2721.

Mindanao (Agusan), *Elmer 13269*. In primary forests, altitude about 300 m. Endemic.

Local name: Biaon (Mbo.).

CRYPTOCARYA OBLONGATA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 129.

Luzon (Laguna, Tayabas), *Merrill 1033, Phil. Pl. 1416* as *C. crebrinervia* Merr. In primary forests at low altitudes. Endemic.

Local name: Puríhan (Tag.).

CRYPTOCARYA OLIGOCARPA Merr. in Philip. Journ. Sci. 17 (1920) 257.

Mindanao (Surigao), *F. B. 34716 Ramos & Pascasio*. In forests at low altitudes. Endemic.

CRYPTOCARYA OLIGOPHLEBIA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 128.

Negros, Basilan, *B. S. 16155 Reillo, 18844, 18883 Miranda, 20683 Tamesis*. In primary forests at low altitudes. Endemic.

CRYPTOCARYA PALAWANENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 256.

Palawan, *F. B. 4141 Curran, 7423 Manalo, Merrill 9325, Elmer 12853, 13098, 13090*. In forests back of the mangrove, at sea level. Endemic.

CRYPTOCARYA PALLIDA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 256.

Mindanao (Zamboanga), Basilan, *Ahern 294, 566, F. B. 18976 Miranda*. In forests at low altitudes. Endemic.

Local name: Ponit (Sul.).

CRYPTOCARYA PARVIFOLIA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 271.

Leyte, *Wenzel 998*. In primary forests, altitude about 900 m. Endemic.

CRYPTOCARYA RAMOSII Merr. in Philip. Journ. Sci. 14 (1919) 395.

Luzon (Ilocos Norte), *B. S. 33071, 33346 Ramos*. In primary forests at low altitudes. Endemic.

CRYPTOCARYA SAMARENSIS Merr. in Philip. Journ. Sci. 12 (1917) Bot. 130.

Panay, Mindanao (Zamboanga), Samar, *B. S. 17351 Ramos, 31326, 36635, 37087 Ramos & Edaño*. In primary forests at low altitudes. Endemic.

Local names: Kamali (S. L. Bis.); mala-igot (S. L. Bis.).

CRYPTOCARYA SUBVELUTINA Elm. Leaf. Philip. Bot. 2 (1910) 707.

Mindanao (Davao), *Elmer 11737*. In primary forests, altitude about 1,050 m. Endemic.

Local name: Magolumog (Bag.).

CRYPTOCARYA TODAYENSIS Elm. Leaf. Philip. Bot. 2 (1910) 709.

Mindanao (Davao), *Elmer 11919, 10713*. In primary forests, altitude about 1,000 m. Endemic.

Local name: Kapiñgan (Bag.).

CRYPTOCARYA VIDALII (Elm.) Merr. in Philip. Journ. Sci. 12 (1917) Bot. 130.

Endiandra vidalii Elm. Leaf. Philip. Bot. 2 (1910) 711.

Sibuyan, *Elmer* 12131. In primary forests, altitude about 225 m. Endemic.

CRYPTOCARYA VILLARII Vidal Rev. Pl. Vasc. Filip. (1886) 222; Ceron Cat. Pl. Herb. Manila (1892) 141.

Cryptocarya ferrea F.-Vill. Novis. App. (1880) 179; Vidal Sinopsis Atlas (1883) 36, t. 78, f. B, non Blume.

Luzon (Union, Benguet, Rizal), *Elmer* 8531, 5897, *Merrill* 2831, 2355. In forests at medium altitudes. Endemic.

Local name: Baliktan (Tag.).

CRYPTOCARYA ZAMBOANGENSIS Merr. in Philip. Journ. Sci. 12 (1917) Bot. 130.

Mindanao (Lanao, Zamboanga), *Ahern* 583, *Williams* 2301, *F. B.* 24053 *Acuña*, 13395 *Foxworthy*, *De Mesa*, & *Villamil*. In forests at low altitudes. Endemic.

Local name: Taming-táming (Sul.).

EXCLUDED SPECIES

CRYPTOCARYA CRASSINERVIA Miq.; F.-Vill. Novis. App. (1880) 178.

CRYPTOCARYA INFECTORIA Miq.; F.-Vill. l. c.

CRYPTOCARYA LAEVIGATA Blume; F.-Vill. op. cit. 179.

CRYPTOCARYA ZOLLINGERIANA Miq.; F.-Vill. op. cit. 178.

13. ENDIANDRA R. Brown

ENDIANDRA CORIACEA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 14, Philip. Journ. Sci. 1 (1906) Suppl. 58.

Endiandra arborea Elm. Leaf. Philip. Bot. 2 (1908) 376.

Luzon (Cagayan, Ilocos Norte, Union, Nueva Ecija, Zambales, Bataan, Cavite, Tayabas), Mindoro, Samar, Leyte, Panay, Mindanao, *Elmer* 6129, 7268, *Wenzel* 345, 964, 1001, 1185, *Merrill* 2200, 3780, *Phil. Pl.* 1610, 32961, 17495 *Ramos*, 28751, 26590, 26380 *Ramos & Edaña*, 22572 *Ramos & Derooy*, *F. B.* 3066, 715 *Borden*, 24768 *Vergara*, 24255 *Bernardo*, 25421 *Duldulao*, 25409 *Labitag*, 26170 *Alejandro*, 22610 *Paraíso*, 126, 190 *Barnes*. In primary forests at low and medium altitudes. Endemic.

Local names: Daligágau (Neg.); lamog-babáe (Tag.); magariláu (Tag.); manugbúgnai (P. Bis.); marabúneg (Ilk.); panalayápen (Ilk.); panglongbúyen (Ilk.); talan (Neg.); usáu (Tag.).

ENDIANDRA GITINGENSIS Elm. Leaf. Philip. Bot. 2 (1910) 712.

Sibuyan, *Elmer* 12420. In forests, altitude about 550 m. Endemic.

Probably not a representative of this genus, but the flowers are as yet unknown.

Local name: Maye-mayebas (P. Bis.).

ENDIANDRA LAXIFLORA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 182.

Luzon (Apayao, Tayabas), Samar, Mindanao (Agusan), *F. B.* 25416 *Labitay*, 25423 *Duldulao*, *B. S.* 24280, 24426 *Ramos*, 28110 *Fénix*, *Elmer* 13434. In primary forests at low and medium altitudes. Endemic.

Local name: Malagasáha (Tag.).

14. **LINDERA** Thunberg

LINDERA APOENSIS Elm. Leaf. Philip. Bot. 2 (1910) 714.

Mindanao (Davao), Agusan, Lanao, *Elmer* 11640, *Clemens* 987, *F. B.* 24350 *Cortez* & *Fernandez*. In primary forests, altitude 700 to 1,200 m. Endemic.

Local names: Hindang (Mbo.); sarirab (Bag.).

EXCLUDED SPECIES

LINDERA ACUMINATA (Blume) F.-Vill. Novis. App. (1880) 181.

LINDERA CAESIA (Reinw.) F.-Vill. l. c.

LINDERA MELASTOMACEA (Nees) F.-Vill. l. c.

LINDERA STRYCHNIFOLIA (S. & Z.) F.-Vill. op. cit. 182.

15. **ITEADAPHNE** Blume

ITEADAPHNE PHILIPPINENSIS Elm. Leaf. Philip. Bot. 2 (1910) 713.

Mindanao (Davao), *Elmer* 11493. In primary forests, altitude about 1,800 m. Endemic.

Local name: Boga (Bag.).

16. **CASSYTHA** Linnaeus

CASSYTHA FILIFORMIS Linn. Sp. Pl. (1753) 35, ed. 2 (1762) 530; Blanco Fl. Filip. (1837) 321, ed. 2 (1845) 226, ed. 3, 2 (1878) 58; Miq. Fl. Ind. Bat. 1¹ (1858) 977; Meisn. in DC. Prodr. 15¹ (1864) 255; F.-Vill. Novis. App. (1880) 182; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 407, Fl. Manila (1912) 211, Sp. Blancoanae (1918) 155.

Cassytha capillaris F.-Vill. Novis. App. (1880) 182, non Meisn.

Batan Islands to Palawan and Mindanao. In thickets, especially near the sea, parasitic on various coarse grasses, shrubs, etc.; in dry regions sometimes found inland up to an altitude of 500 m. Pantropic.

Local names: Barutbárut (Ilk.); kauad-káuad (Tag.); kauad-kauáran (Tag.); kauat-káuat (Sul.); malabohok (Bik., Bis., Tag.); uauaken-iráng (Iv.).

EXCLUDED GENUS

LAURUS LANOSA Blanco Fl. Filip. (1837) 318, ed. 2 (1845) 224, ed. 3, 2 (1878) 54; Meissn. in DC. Prodr. 15¹ (1864) 259; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 74, Sp. Blancoanae (1918) 155.

This is possibly a *Cryptocarya*, but its exact identity is indeterminable from Blanco's imperfect description. It has nothing to do with *Litsea villosa* Blume to which it was reduced by F.-Villar.

HERNANDIACEAE

1. *GYROCARPUS* Jacquin

GYROCARPUS AMERICANUS Jacq. Stirp. Am. (1763) 282, *t.* 178; Merr. Sp. Blancoanae (1918) 155.

Gyrocarpus asiaticus Willd. Sp. Pl. 4 (1805) 982; Miq. Fl. Ind. Bat. 1² (1858) 978.

Gyrocarpus jacquini Gaertn. Fruct. 2 (1791) 92; F.-Vill. Novis. App. (1880) 81; Vidal Sinopsis Atlas (1883) 26, *t.* 48, *f.* E; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 45.

Gyrocarpus rugosus R. Br. var. *philippinensis* Meisn. in DC. Prodr. 15¹ (1864) 248.

Gyrocarpus lobatus Blanco Fl. Filip. ed. 2 (1845) 54, ed. 3, 1 (1877) 103.

Luzon (Abra, Ilocos Sur, Pangasinan, Nueva Ecija, Bulacan, Bataan, Rizal, Tayabas), Marinduque, Palawan. In forests near the seashore and on dry slopes inland. Pantropic.

Local names: Kulong-kúlong (Tag.); lapo-lápo (Ilk.); malasapsáp (Pang., Tag.).

2. *ILLIGERA* Blume

ILLIGERA CARDIOPHYLLA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 292.

Babuyan Islands (Camiguin), Luzon (Ilocos Norte), *B. S.* 4083 *Fénix*, 33117 *Ramos*. In thickets at low altitudes. Endemic.

ILLIGERA ELLIPTIFOLIA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 291.

Samar, Mindanao (Butuan), *B. S.* 17478 *Ramos*, *F. B.* 20571 *Miranda*. In forests at low altitudes. Endemic.

ILLIGERA LUZONENSIS (Presl) Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 18, 27 (1905) 45, Philip. Journ. Sci. 1 (1906) Suppl. 58, 3 (1908) Bot. 407, Fl. Manila (1912) 212, Sp. Blancoanae (1918) 156; Hayata in Journ. Coll. Sci. Univ. Tokyo 30¹ (1911) 259.

Henschelia luzonensis Presl Rel. Haenk. 2 (1835) 81, *t.* 63.

Gronovia ternata Blanco Fl. Filip. (1837) 186, ed. 2 (1845) 132, ed. 3, 1 (1877) 236.

Halesia ternata Blanco op. cit. 399, 279, 2: 153.

Illigera appendiculata Vidal Cat. Pl. Prov. Manila (1880) 30, non Blume.

Illigera dubia F.-Vill. Novis. App. (1880) 81, non Span.

Illigera meyeriana Kunth ex Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 410; Walp. Ann. 1 (1849) 579; Vidal Sinopsis Atlas (1883) 26, *t.* 48, *f.* F, Phan. Cuming. Philip. (1885) 112, Rev. Pl. Vasc. Filip. (1886) 128.

Illigera ternata Dunn in Journ. Linn. Soc. Bot. 38 (1908) 294.

Luzon (Union, Pangasinan, Nueva Ecija, Bulacan, Rizal, Bataan, Tayabas, Laguna), Palawan. In thickets at low and medium altitudes. Formosa.

Local names: Alibalibin (Pamp.); binatang (Pang.); kuripatong (Ilk.); lagitik (Tag.); taktakop (Pang.).

ILLIGERA MEGAPTERA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 290.

Illigera diptera Elm. Leaf. Philip. Bot. 7 (1915) 2687.

Panay, Mindanao (Agusan), *Elmer 13362*, *B. S. 21511* *Escritor*, *31221* *Ramos & Edaña*. In forests at low and medium altitudes. Endemic.

Local names: Balógo (Mbo.); kaba-kaba (Mbo.).

ILLIGERA PLATYANDRA Dunn in Journ. Linn. Soc. Bot. 38 (1908) 294.

Luzon (*Wallis*, in Herb. Kew.). Southern China and Indo-China.

ILLIGERA PUBESCENS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 446.

Luzon (Lepanto), *Vanoverbergh 2135*. In thickets along streams, altitude 500 m. Endemic.

ILLIGERA RETICULATA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 291.

Luzon (Laguña), *F. B. 7761* *Curran & Merritt*, *21405* *Villamil*. In thickets and second-growth forests at low altitudes. Endemic.

EXCLUDED SPECIES

ILLIGERA CORYZADENIA Meisn.; F.-Vill. Novis. App. (1880) 81.

3. **HERNANDIA** Plumier

HERNANDIA OVIGERA Linn. in Stickm. Herb. Amb. (1754) 14, Amoen.

Acad. 4 (1757) 125, Syst. ed. 10 (1759) 1264, Sp. Pl. ed. 2 (1763)

1392; Meisn. in DC. Prodr. 15¹ (1864) 262; F.-Vill. No is. App.

(1880) 182; Merr. in Philip. Journ. Sci. 9 (1914) Bot. 290,

Interpret. Herb. Amb. (1917) 239.

Hernandia peltata Meisn. in DC. Prodr. 15¹ (1864) 263; F.-Vill.

Novis. App. (1880) 182; Vidal Synopsis Atlas (1883) 37, *t.* 78,

f. G, Rev. Pl. Vasc. Filip. (1886) 229, Phan. Cuming. Philip. (1885)

139; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 74, Philip. Bu-

reau Forest. Bull. 1 (1903) 21, Interpret. Herb. Amb. (1917) 239,

Sp. Blancoanae (1918) 155.

Hernandia sonora Blanco Fl. Filip. (1837) 689, ed. 2 (1845) 478,

ed. 3, 3 (1879) 93; Miq. Fl. Ind. Bat. 1² (1858) 887, non Linn.

Central Luzon (Zambales, Tayabas) to Palawan, Mindanao, and the Sulu Archipelago. Along the seashore, occasionally extending inland on slopes at low altitudes. Abundant material shows that the supposed differences between *Hernandia ovigera* Linn. and *H. peltata* Meisn. break down absolutely. Ceylon to tropical East Africa, Madagascar, through Malaya to tropical Australia and Polynesia.

Local names: Banung-kalauai (Tagb.); habag (C. Bis.); kolon-kogon (Bik.); kolonkógun (Bik.); kolung-kólung (Sul., Tag.); koron-kóron (Bik.); kung-kúng (Yak.); malat-antángan (Tag.); pantog-lubo (Tag.); tabataba (Bik.).

PAPAVERACEAE

1. **ARGEMONE** Tournefort

ARGEMONE MEXICANA Linn. Sp. Pl. (1753) 508; DC. Prodr. 1 (1824)

120; Blanco Fl. Filip. (1837) 454, ed. 2 (1845) 316, ed. 3, 2 (1878)

220, *t.* 187; Miq. Fl. Ind. Bat. 1² (1858) 92; F.-Vill. Novis. App.

(1880) 9; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 33, 27

(1905) 17, Philip. Journ. Sci. 3 (1908) Bot. 407, Fl. Manila (1912)

213, Sp. Blancoanae (1918) 156.

In and about towns, a weed in waste places, widely distributed in the Philippines. A native of tropical America, introduced into the Philippines and now pantropic.

Local names: Baruás (Iv.); diluáriu (Tag.); kachúmba (Ilk.); kagang-kágang (C. Bis.); kasúbang-áso (Ilk.).

CRUCIFERAE

1. LEPIDIUM Linnaeus

LEPIDIUM VIRGINICUM Sp. Pl. (1753) 645; Thell. in Vierteljahrsschr. Nat. Ges. Zürich 51 (1906) 163, subsp. **EU-VIRGINICUM** Thell. in Neue Denkschr. Schweiz. Ges. Naturw. Zürich 41¹ (1906) 225. *Lepidium rudera* Ceron Cat. Pl. Herb. Manila (1892) 15; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 194, non Linn.

Luzon (Cagayan, Nueva Vizcaya). A weed in towns, also in some regions occurring along sandy seashores. Introduced; a native of America, now in all warm countries.

Local name: Sapatótes (Ilk.).

2. BRASSICA Tournefort

BRASSICA INTEGRIFOLIA (West) O. E. Schulz in Urb. Symb. Antill. 3 (1903) 509, Engl. Pflanzenreich 70 (1919) 56.

Sinapis integrifolia West Bijdr. St. Croix (1793) 296; Willd. Hort. Berol. (1806-1816) 14, t. 14.

Brassica juncea F.-Vill. Novis. App. (1880) 10; Ceron Cat. Pl. Herb. Manila (1892) 15; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 17, Fl. Manila (1912) 214, Sp. Blancoanae (1918) 157, non Coss.

Sinapis juncea Blanco Fl. Filip. ed. 2 (1845) 362, ed. 3, 2 (1878) 304, non Linn.

Sinapis brassicata Blanco Fl. Filip. ed. 2 (1845) 362, ed. 3, 2 (1879) 305, non Linn.

Brassica orientalis Blanco op. cit. 519, 361, 303, non Linn.

Sinapis sinensis Blanco Fl. Filip. (1837) 520, non Gmel.

Widely distributed in the settled areas of the Philippines, in towns, near houses, etc., planted and spontaneous. Introduced from Asia. Pantropic, occurring also in some temperate regions.

Local name: Mostaza (Sp.).

EXCLUDED SPECIES

BRASSICA CAMPESTRIS Linn.; F.-Vill. Novis. App. (1880) 10.

BRASSICA NIGRA KOCH; F.-Vill. op. cit. 9.

BRASSICA OLERACEA Linn.; F.-Vill. l. c.

The cabbage (Sp. *repollo*); cultivated only.

BRASSICA CERNUA (Thunb.) Forbes & Hemsl. [*B. pekinensis* (Lour.) Gagnep.].

A form of this is commonly cultivated by Chinese gardeners for the Manila markets. It is locally known as *pechai*, and is perhaps a form of *Brassica integrifolia* (West) O. E. Schulz derived by selection and cultivation.

3. NASTURTIUM R. Brown

NASTURTIUM INDICUM (Linn.) DC. Syst. 2 (1821) 199, Prodr. 1 (1824) 139; Miq. Fl. Ind. Bat. 1² (1858) 93; F.-Vill. Novis. App. (1880) 19; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 17, Philip. Journ. Sci. 5 (1910) Bot. 350, Fl. Manila (1912) 213, Sp. Blancoanae (1918) 157.

Sisymbrium indicum Linn. Mant. 1 (1767) 93.

Cardamine glandulosa Blanco Fl. Filip. (1837) 531.

Cardamine impatiens Blanco op. cit. ed. 2 (1845) 363, ed. 3, 2 (1879) 306, non Linn.

? *Nasturtium montanum* Rolfe in Journ. Bot. 23 (1885) 210; Vidal Phan. Cuming. Philip. (1885) 94, Rev. Pl. Vasc. Filip. (1886) 46, non (?) Wall.

In and about towns along drains, ditches, etc., waste places, along streams, etc., throughout the Philippines in the more or less settled areas, apparently introduced. Tropical Asia and Malaya.

Local names: Alalahia (Ibn.); apopo (Bon.); gandeí (Bon.); gelgelai (Bon.); gilgiloi (Ig.); lampaka (Ilk.); sabi (Bag.); undi (If.).

NASTURTIUM OFFICINALE R. Br. in Ait. Hort. Kew ed. 2, 4 (1812) 110.

Sisymbrium nasturtium Linn. Sp. Pl. (1753) 657.

Roripa nasturtium Rusby in Mem. Torr. Bot. Club 3 (1893) 5; Britt. & Br. Ill. Fl. U. S. 2 (1897) 126, f. 1721.

Luzon (Benguet), *Wester*. Abundant in shallow water and in small streams in Trinidad Valley, altitude about 1,300 m. Probably introduced since 1912. A native of Europe and northern Asia, now naturalized in most temperate and subtemperate countries. Water cress.

4. CARDAMINE Tournefort

CARDAMINE REGELIANA Miq. Ann. Mus. Bot. Lugd.-Bat. 2 (1865) 73;

J. R. Drummond ex Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 100; Merr. op. cit. 5 (1910) Bot. 350.

Cardamine parviflora Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 194, non Linn.

Luzon (Bontoc, Lepanto, Benguet). Occasional in open damp places, altitude 1,200 to 1,800 m. Eastern Asia and Japan southward to Malaya.

Local name: Gilgiloi-ti-anito (Bon.).

EXCLUDED GENERA

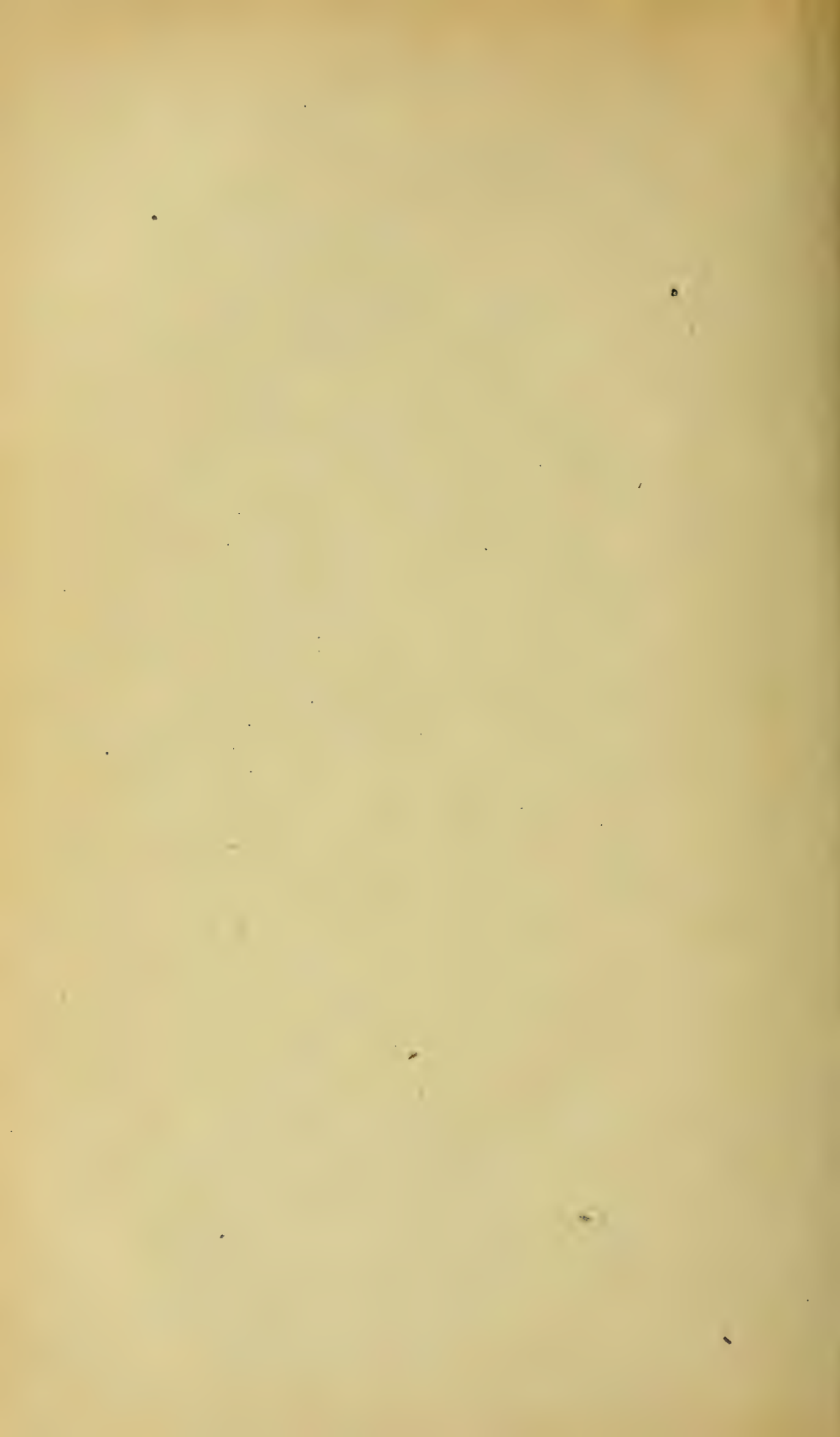
RAPHANUS SATIVUS Linn. Sp. Pl. (1753) 669; F.-Vill. Novis. App. (1880) 10; Merr. Fl. Manila (1912) 214.

The common radish is widely cultivated in the Philippines and is commonly known as *rabanos* (Sp.), locally corrupted into *labanos* (Tag.). The shepherd's-purse (*Capsella bursa-pastoris* Medic.) has been collected once in Baguio, but apparently occurs there only as a casual plant.

CAPPARIDACEAE

1. CLEOME Linnaeus

CLEOME SPINOSA Jacq. Enum. Pl. Carib. (1760) 26; Linn. Sp. Pl. ed. 2 (1762) 939; Usteri Beitr. Ken. Philip. Veg. (1905) 112.



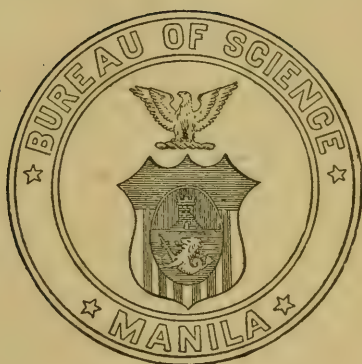
AN ENUMERATION OF PHILIPPINE FLOWERING PLANTS

BY

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VOLUME 2, FASCICLE 3



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EXPLANATORY NOTE

The present enumeration is an attempt to summarize in convenient form for consultation our present knowledge of Philippine flowering plants, and represents a part of the knowledge accumulated by the author during a course of about twenty years' study of the problem. In the work an attempt has been made to account for all binomials accredited to the Philippine flora; to adjust the synonymy when necessary; to include all important references to the Philippine botanical literature and essential references to extra-Philippine literature; to give the habitat, altitudinal range, and Philippine and extra-Philippine distribution of each species; to cite illustrative specimens where expedient or necessary; and to record all available local names for each species.

It is proposed to issue the present work in fascicles, utilizing one volume for the gymnosperms and the monocotyledons and two volumes for the dicotyledons. It is planned to publish full introductory and explanatory matter in a general introduction to be prefixed to Volume 1 when the entire enumeration is completed.

ELMER D. MERRILL.

MANILA, P. I., *August 25, 1921.*

A recent introduction, now thoroughly naturalized and very abundant along streams in Benguet, *Merrill Phil. Pl. 1731*. A native of tropical America, now pantropic.

Local name: Botete (Ig.).

2. GYNANDROPSIS de Candolle

GYNANDROPSIS GYNANDRA (Linn.) comb. nov.

Cleome gynandra Linn. Sp. Pl. (1753) 671; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 182.

Cleome pentaphylla Linn. Sp. Pl. ed. 2 (1763) 938.

Gynandropsis pentaphylla DC. Prodr. 1 (1824) 238; Miq. Fl. Ind. Bat. 1² (1858) 96; F.-Vill. Novis. App. (1880) 10; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 58, Fl. Manila (1912) 216, Sp. Blancoanae (1918) 158.

Pedicellaria pentaphylla Schrank in Roem. & Usteri Mag. Bot. 3¹ (1790) 8, 10; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 18.

Sinapistrum pentaphyllum Medic. in Index Kew. 2 (1895) 914.

Cleome alliacea Blanco Fl. Filip. (1837) 522.

Cleome alliodora Blanco op. cit. ed. 2 (1845) 363, ed. 3, 2 (1879) 307, t. 233.

Throughout the Philippines at low and medium altitudes, a weed in waste places; often abundant especially near the sea. Pantropic.

Local names: Apoi-apoián (Tag.); balabalanóian (Tag.); halayá (P. Bis.); huláya (P. Bis.); tantandók (Ilk.); tantandók-a-dadakél (Ilk.).

GYNANDROPSIS SPECIOSA (HBK.) DC. Prodr. 1 (1824) 238; F.-Vill. Novis. App. (1880) 10; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 24, 27 (1905) 18, Sp. Blancoanae (1918) 158.

Cleome speciosa HBK. Nov. Gen. Sp. Pl. 5 (1817) 84, t. 436.

Cleome pentaphylla Blanco Fl. Filip. (1837) 523, non Linn.

Cleome gigantea Blanco op. cit. ed. 2 (1845) 364, ed. 3, 2 (1879) 307, t. 234, non Linn.

Luzon (Union, Manila, Cavite), Leyte, *B. S. 21085 Ramos, Wenzel 1066, Merrill 8502, Sp. Blancoanae 149*. Occasional in waste places, old clearings, etc. A native of tropical America, now pantropic.

3. POLANISIA Rafinesque

POLANISIA ICOSANDRA (Linn.) W. & A. Prodr. (1834) 22; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 68; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 77.

Cleome icosandra Linn. Sp. Pl. (1753) 672.

Polanisia viscosa DC. Prodr. 1 (1824) 242; Blanco Fl. Filip. ed. 2 (1845) 364, ed. 3, 2 (1879) 308; Miq. Fl. Ind. Bat. 1² (1858) 97; F.-Vill. Novis. App. (1880) 10; Vidal Phan. Cuming. Philip. (1885) 94, Rev. Pl. Vasc. Filip. (1886) 47; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 17, Philip. Journ. Sci. 3 (1908) Bot. 407, Fl. Manila (1912) 216, Sp. Blancoanae (1918) 158.

Cleome viscosa Linn. l. c.; Blanco Fl. Filip. (1837) 522.

Cleome acutifolia Elm. Leaf. Philip. Bot. 7 (1915) 2574.

Throughout the Philippines at low and medium altitudes in the settled areas; a common weed. Pantropic.

Local names: Apoi-apoian (Tag.); balabalanóian (Tag.); huláya (P. Bis.); kabáu (Iv.); lampotaki (Tagb.); silisian (Tag.); silisilíhan (Tag.); tantandók (Ilk.); tuláyag (P. Bis.).

4. CRATAEVA Linnaeus

CRATAEVA RELIGIOSA Forst. f. Prodr. (1786) 35; DC. Prodr. 1 (1824) 243; Blanco Fl. Filip. (1837) 399; ed. 2 (1845) 279, ed. 3, 2 (1878) 154, *t. 176*; F.-Vill. Novis. App. (1880) 10; Vidal Sinopsis Atlas (1883) 13, *t. 6, f. C*, Phan. Cuming. Philip. (1885) 94, Rev. Pl. Vasc. Filip. (1886) 48; Merr. Sp. Blancoanae (1918) 158.
Crataeva axillaris Presl Rel. Haenk. 2 (1835) 85; F.-Vill. Novis. App. (1880) 10.

Northern Luzon to Masbate and Palawan, probably also in Mindanao and the Sulu Archipelago. In waste places, along streams, and in thickets near the sea, sometimes planted. India to Malaya and Polynesia.

Local names: Balai-lamók (Ilk.); balai-namók (Ilk.); banugan (Bis.); duliñgatok (Pamp.); kalaluñgau (Tagb.); mokalbol (Tagb.); salingbobog (Bis., Tag.).

5. CAPPARIS Tournefort

CAPPARIS AFFINIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 303.

Palawan, *B. S. 21583* Escritor. In thickets at low altitudes. Endemic.

CAPPARIS CERASIFOLIA A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 71; Walp. Ann. 7 (1868) 189; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 77.

Capparis lasiopoda Turcz. in Bull. Soc. Nat. Mosc. 27² (1854) 320; F.-Vill. Novis. App. (1880) 11; Vidal Rev. Pl. Vasc. Filip. (1886) 48, Phan. Cuming. Philip. (1885) 94.

Luzon (Ilocos Norte, Cagayan, Union), Palawan, Sulu Archipelago, Mindanao (Zamboanga, Surigao, Agusan, Lanao, Davao), *Elmer 12721, 13538, Copeland 658, Williams 2152, 2200, F. B. 26999 Mallonga, Cuming 955, B. S. 32831, 32857, 27504 Ramos*. In thickets at low altitudes. Endemic.

Local name: Holiboi (Mbo.).

CAPPARIS COPELANDII Elm. Leaf. Philip. Bot. 2 (1910) 680.

Mindanao (Davao), *Copeland 705, Elmer 10943*. In thickets at medium altitudes. Endemic.

Local name: Sulu-sulu (Bag.).

CAPPARIS CORDIFOLIA Lam. Encycl. 1 (1785) 609; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 235, Fl. Manila (1912) 216, Sp. Blancoanae (1918) 159.

Capparis mariana Jacq. Hort. Schoenbr. 1 (1797) 57, *t. 109*; Blanco Fl. Filip. ed. 2 (1845) 305, ed. 3, 2 (1878) 201, *t. 179*; Miq. Ill. Fl. Archip. Ind. (1871) 36; F.-Vill. Novis. App. (1880) 11.

Capparis baducca Blanco Fl. Filip. (1837) 438, non Linn.

Capparis spinosa Linn., var. *mariana* K. Schum. in Engl. Bot. Jahrb. 9 (1887) 201.

Occasionally cultivated in Manila, spontaneous along the seashore in Bohol, *Merrill Sp. Blancoanae* 516, *Guerrero, Wester*. Introduced from the Marianne Islands. Polynesia.

Local name: Alcaparras from *Sp. alcaparra* = caper.

CAPPARIS EMARGINATA Presl Rel. Haenk. 2 (1835) 85; F.-Vill. Novis. App. (1880) 11.

Luzon, without locality, *Haenke*, Pangasinan, *B. S.* 18318 *Otanes*. In dry thickets at low altitudes; scarcely other than a pubescent form of *Capparis sepiaria* Linn. Endemic.

CAPPARIS HORRIDA Linn. f. Suppl. (1781) 264; F.-Vill. Novis. App. (1880) 11; Vidal Phan. Cuming. Philip. (1885) 94, Rev. Pl. Vasc. Filip. (1886) 48; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 58, Fl. Manila (1912) 215, *Sp. Blancoanae* (1918) 159.

Capparis aurantioides Presl Rel. Haenk. 2 (1835) 86; F.-Vill. Novis. App. (1880) 11; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 70.

Capparis nemorosa Blanco Fl. Filip. (1837) 438.

Capparis micrantha Blanco op. cit. ed. 2 (1845) 305, ed. 3, 2 (1878) 200, t. 178, non DC.

Capparis linearis Blanco op. cit. 438, 305, 200.

Capparis viminea F.-Vill. Novis. App. (1880) 11, non Hook. f. & Th.

Northern Luzon (Cagayan) to Mindanao. In thickets at low and medium altitudes. India to Indo-China and Malaya.

Local names: Baraláuik (Ibn.); dauag (Tag.); halubátag-báging (Tag.); lagainau (Bis.); talakták (Ilk.); tarabtáb (Ilk.).

CAPPARIS ILOCANA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 13.

Luzon (Ilocos Norte), *B. S.* 27120, 32713, 32689 *Ramos*. In thickets at low altitudes. Endemic.

CAPPARIS LITTORALIS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 270.

Luzon (Tayabas), *F. B.* 11111 *Curran*. In thickets along the seashore. Endemic.

CAPPARIS LOBBIANA Turcz. in Bull. Soc. Nat. Mosc. 27² (1854) 323; Rolfe in Journ. Bot. 23 (1885) 210; Vidal Rev. Pl. Vasc. Filip. (1886) 47.

Luzon (Bataan, Rizal, Laguna), Mindoro, *Williams* 382, 287, *Merrill* 3858, *Phil. Pl.* 1887, *B. S.* 6173 *Robinson*, 1052, 13694, 39726 *Ramos*, *Whitford* 518, *Elmer* 18160. In thickets at low altitudes; Lobb's specimen on which the species was based was from Luzon, not from Singapore as stated in the original description. Endemic.

CAPPARIS LOHERI Merr. in Philip. Journ. Sci. 7 (1912) Bot. 270.

Luzon (Rizal), *Loher* 2016, 6787. In thickets or forests at low or medium altitudes. Endemic.

CAPPARIS LONGIPES Merr. in Philip. Journ. Sci. 13 (1918) Bot. 12.

Luzon (Abra), *B. S.* 26980 *Ramos*. In forests along streams and on cliffs at low or medium altitudes. Endemic.

CAPPARIS LUZONENSIS Turcz. in Bull. Soc. Nat. Mosc. 27² (1854) 324; F.-Vill. Novis. App. (1880) 11; Vidal Phan. Cuming. Philip. (1885) 94, Rev. Pl. Vasc. Filip. (1886) 47; Merr. Sp. Blancoanae (1918) 159.

Crataeva octandra Blanco Fl. Filip. (1837) 400, ed. 2 (1845) 280, ed. 3, 2 (1878) 155, non Jacq.

Capparis floribunda F.-Vill. Novis. App. (1880) 11, non Wight.

Luzon (Ilocos Norte, Ilocos Sur, Tayabas, Rizal), *Cuming 1201, 1210, B. S. 13389 Ramos, Merrill 2282*. In thickets or forests at low or medium altitudes. Endemic.

Var. **AMPLA** var. nov.

A typo differt foliis majoribus, 4 ad 4.5 cm latis.

Luzon (Isabela, Cagayan, Benguet), *B. S. 8093 Ramos, F. B. 11593, 16745 Curran, Adduru 260, Elmer 5883*. In thickets at low and medium altitudes. Endemic.

Local names: Balisaog (Tag.); halubáгат-babáe (Tag.); madulungban (Ig.).

CAPPARIS MICRACANTHA DC. Prodr. 1 (1824) 247; Miq. Fl. Ind. Bat. 1² (1858) 99; F.-Vill. Novis. App. (1880) 11; Vidal Phan. Cuming. Philip. (1885) 94, Rev. Pl. Vasc. Filip. (1886) 47; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 58, Fl. Manila (1912) 215, Sp. Blancoanae (1918) 160.

Capparis odorata Blanco Fl. Filip. (1837) 439, ed. 2 (1845) 305, ed. 3, 2 (1878) 201; F.-Vill. Novis. App. (1880) 11.

Capparis halobagat Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 180.

Capparis forsteniana Miq. Ill. Fl. Archip. Ind. (1870) 32.

Northern Luzon to Mindanao. In thickets, second-growth forests, etc., at low and medium altitudes; common. Burma, Siam, Indo-China to the Malay Peninsula and Archipelago.

Local names: Alunṅung (P. Bis.); balituk (Buk.); bayábas-uák (Tag.); dauag (Tag.); halubáгат (Tag.); halubáгат-káhoi (Tag.); kasuit (Pamp.); malaráyat-káhoi (Tag.); salimbáгат (Tag.); salimómo (Bis.); saluásuá (Bis.); tarabtáb (Ilk.); tarabtab-uák (Ilk.); taraptáp (Ilk.); tinikán (Tag.).

CAPPARIS OBLONGATA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 15, Philip. Journ. Sci. 1 (1906) Suppl. 58.

? *Capparis floribunda* Vidal Phan. Cuming. Philip. (1885) 94, Rev. Pl. Vasc. Filip. (1886) 48, non Wight.

Capparis viridis Elm. Leaf. Philip. Bot. 8 (1919) 3076.

Luzon (Bataan, Laguna, Tayabas, Sorsogon), *Merrill 8619, F. B. 2632 Meyer, 25390 Mabesa, B. S. 25482 Yates, Elmer 15956, 16743 (C. irosinensis Elm.), 18160*. In forests, altitude 300 to 600 m. Endemic.

CAPPARIS PALAWANENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 304.

Palawan, *Merrill 9459*. In forests at low altitudes. Endemic.

CAPPARIS SEPIARIA Linn. Syst. ed. 10 (1759) 1071; F.-Vill. Novis. App. (1880) 11; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 209; Miq. Fl. Ind. Bat. 1² (1858) 101; A. Gray Bot. Wilkes U. S.

Explor. Exped. (1854) 70; Vidal Sinopsis Atlas (1883) 13, *t. 6*, *f. A*, Phan. Cuming. Philip. (1885) 94, Rev. Pl. Vasc. Filip. (1886) 47 (incl. var. *acuta* Vidal); Merr. in Philip. Journ. Sci. 3 (1908) Bot. 77, Fl. Manila (1912) 215.

Babuyan Islands and northern Luzon to Mindanao and the Sulu Archipelago. In thickets at low altitudes. India to Malaya and Australia.

Local names: Aráyat (Ilk.); keme-keming (Ilk.); tarabtab (Tag.).

CAPPARIS TYLOPHYLLA Spreng. Syst. 4 (1827) Cur. Post. 204.

Capparis cumingii Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 101.

Capparis mucronata Elm. Leaf. Philip. Bot. 5 (1913) 1757.

Capparis turczaninowii Elm. op. cit. 1755.

Luzon (Ilocos Norte, Ilocos Sur, Nueva Ecija, Rizal, Bataan), Palawan, Cuming 1234, Elmer 12720, 13080, F. B. 14050 Merritt & Darling, 22133 Alvarez, B. S. 10849 Foxworthy, Loher 6785. In thickets at low altitudes. Java.

CAPPARIS VENOSA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 305.

Mindanao (Cotabato), F. B. 14216 Whitford. In dipterocarp forests at low altitudes. Endemic.

6. STIXIS Loureiro

STIXIS PHILIPPINENSIS (Turcz.) Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 72, Philip. Journ. Sci. 1 (1906) Suppl. 58.

Roydsia philippinensis Turcz. in Bull. Soc. Nat. Mosc. 27² (1854) 329; F.-Vill. Novis. App. (1880) 11; Vidal Sinopsis Atlas (1883) 13, *t. 6*, *f. B*, Phan. Cuming. Philip. (1885) 94, Rev. Pl. Vasc. Filip. (1886) 48.

Roydsia floribunda Planch. ex Mast. in Hook. f. Fl. Brit. Ind. 1 (1874) 409.

Stixis floribunda Pierre in Bull. Soc. Linn. Paris 1 (1887) 655.

Luzon (Laguna, Bataan), Mindanao (Surigao, Cotabato, Davao), Cuming 541, F. B. 24199 Bawan, 2263 Meyer, 2326 Borden, 26315 Mabesa, 26266 Mallonga, Williams 2718, Merrill Phil. Pl. 454. In forests at low and medium altitudes. Endemic.

Local name: Lanitnet (Tag.).

MORINGACEAE

1. MORINGA Burman

MORINGA OLEIFERA Lam. Encycl. 1 (1785) 398; Blanco Fl. Filip. (1837) 341, ed. 2 (1845) 238, ed. 3, 2 (1878) 80, *t. 125*; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 36, Philip. Bureau Forestry Bull. 1 (1903) 22, Philip. Journ. Sci. 1 (1906) Suppl. 59, Fl. Manila (1912) 217, Sp. Blancoanae (1918) 160.

Guilandina moringa Linn. Sp. Pl. (1753) 381.

Moringa pterygosperma Gaertn. Fruct. 2 (1791) 314; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 325; Miq. Fl. Ind. Bat. 1² (1855) 350; Vidal Sinopsis Atlas (1883) 22, *t. 38*, Rev. Pl. Vasc. Filip. (1886) 102; F.-Vill. Novis. App. (1880) 56.

Moringa nux-ben Perr. in Mem. Soc. Linn. Paris 3 (1824) 129; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 305.

Planted throughout the settled areas of the Philippines at low and medium altitudes. The horse-radish tree, introduced from tropical Asia or Malaya in the prehistoric period, now pantropic in cultivation.

Local names: Arúnggai (Pang.); balúñgai (Bis.); dool (Pamp., Bis.); kalamúñgai (P. Bis.); kalúñgai (Bik., Bis., Tag.); kamalóñgan (P. Bis.); kamalúñgai (Pamp., Tag.); komkompilán (Ilk.); malóñgai (Tag.); malúñgai (Tag.); malúñgit (Pamp., Bis.); maróñgoi (Sbl.); marúngai (Ilk., Ib.).

NEPENTHACEAE

1. NEPENTHES Linnaeus

NEPENTHES ALATA Blanco Fl. Filip. (1837) 805, ed. 2 (1845) 555, ed. 3, 3 (1879) 214; Hook. f. in DC. Prodr. 17 (1873) 99; F.-Vill. Novis. App. (1880) 173; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 218; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 59, 5 (1910) Bot. 350, Sp. Blancoanae (1918) 160; Macfarl. in Engl. Pflanzenreich 36 (1908) 71.

Nepenthes blancoi Blume Mus. Bot. Lugd.-Bat. 2 (1852) 10; Hook. f. in DC. Prodr. 17 (1873) 105; Macfarl. in Engl. Pflanzenreich 36 (1908) 40.

Nepenthes sp. Blanco Fl. Filip. (1837) 808, ed. 2 (1845) 556, ed. 3, 3 (1879) 215.

Nepenthes melamphora F.-Vill. Novis. App. (1880) 173, non Blume.

Northern Luzon (Cagayan) to Mindanao, common in the mossy forest, chiefly on exposed ridges on the higher mountains in the Mountain Province, occurring on open grassy slopes above an altitude of 1,400 m; in Mindoro and other regions where the forests are continually wet, occurring along streams at low and medium altitudes. Endemic.

Local names: Aran-kálau (Bis.); batbatidór (Ilk.); batidór (Ilk.); gorgorita (Ilk.); inomang-kálau (Tag.); inomang-kalóo (Bik.); kádung (Ilk.); kaka (Tag.); kakalong (Ig.); kakalum (Ig.); kakalung (Ig.); kalo (Ig.); kalu (Bon.); opli (Tag.); salud-salud (C. Bis.); sikado (Bag.); sogon-sogon (C. Bis.); taká (Bik.); tandayrúa (C. Bis.); ulakgio (Bon.).

Var. **BIFLORA** Macfarl. in Engl. Pflanzenreich 36 (1908) 72.

Negros, *Whitford 1723*. On exposed ridges in the mossy forest, altitude about 1,100 m.

Var. **ECRISTATA** Macfarl. l. c.

Nepenthes graciliflora Elm. Leaf. Philip. Bot. 4 (1912) 1494.

Leyte, Sibuyan, Mindanao, *F. B. 16886 Rosenbluth, 4632 Mcarns & Hutchinson, Elmer 12465*. On forested ridges, altitude 1,100 to 1,700 m.

NEPENTHES BURKEI Mast. in Gard. Chron. III 6 (1889) 492, 566, f. 69, 8 (1890) 184, Hort. Veitch. (1906) 300, 486; Macfarl. in Engl. Pflanzenreich 36 (1908) 55.

Mindoro, Panay, *Merrill 5774, F. B. 4392 Merritt, B. S. 32597 McGregor*. In the mossy forest, altitude 1,000 to 1,400 m. Endemic.

NEPENTHES COPELANDII Merr. ex. Macfarl. in Engl. Pflanzenreich 36 (1908) 51.

Mindanao (Davao, Mt. Apo), *Copeland 1033, Elmer 11523, De Vore & Hoover 294*. In thickets, altitude about 2,400 m. Endemic.

NEPENTHES DEANIANA Macfarl. in Engl. Pflanzenreich 36 (1908) 57.

Palawan, *F. B. 3891 Curran, 23337 Danao*. On summit of Mt. Pulgar, altitude 1,300 m. Endemic.

NEPENTHES MERRILLIANA Macfarl. in Contr. Bot. Lab. Univ. Penn. 3 (1911) 207, *t. 1*.

Nepenthes surigaoensis Elm. Leaf. Philip. Bot. 8 (1915) 2785.

Mindanao (Surigao), *F. B. 7545 Hutchinson, Elmer 13705, Lyon*. In forests, extending from low altitudes to 1,600 m. Endemic.

Local names: Batidor (Sp.); handayrua (C. Bis.); lapsai (Mbo.); lapasayin (Mbo.).

NEPENTHES MIRABILIS (Lour.) Merr. Interpret. Herb. Amb. (1917) 242.

Phyllamphora mirabilis Lour. Fl. Cochinch. (1790) 606.

Nepenthes phyllamphora Willd. Sp. Pl. 4² (1805) 874; Hook. f. in DC. Prodr. 17 (1873) 97; F.-Vill. Novis. App. (1880) 173; Ceron Cat. Pl. Herb. Manila (1892) 138; Macfarl. in Engl. Pflanzenreich 36 (1908) 63.

Mindanao (Lanao, Zamboanga), *Clemens 816, 923, F. B. 6575 Hutchinson*. In swamps and forests from near sea level to an altitude of 900 m. Southern China, Indo-China, through the Malay Peninsula, Sumatra, Java, and Borneo to New Guinea and the Caroline Islands.

NEPENTHES PHILIPPINENSIS Macfarl. in Engl. Pflanzenreich 36 (1908) 43.

Nepenthes brachycarpa Merr. in Philip. Journ. Sci. 10 (1915) Bot. 306.

Palawan, *B. S. 721 Foxworthy, Merrill 9588, 9615*. On steep slopes in dry forests, altitude 250 to 350 m. Endemic.

Local name: Kuong-kuong (Tagb.).

NEPENTHES TRUNCATA Macfarl. in Contr. Bot. Lab. Univ. Penn. 3 (1911) 209, *t. 11*.

Mindanao (Surigao, Agusan), *Bolster 270, Allen 171, Eddingfield, Weber, Elmer 13483*. In wet forests, altitude 600 to 1,100 m. Endemic.

Local name: Sandaoua (Mbo.).

NEPENTHES VENTRICOSA Blanco Fl. Filip. (1837) 807, ed. 2 (1845) 556, ed. 3, 3 (1879) 215; Blume Mus. Bot. Lugd.-Bat. 2 (1852) 10; Hook. f. in DC. Prodr. 17 (1873) 100; F.-Vill. Novis. App. (1880) 173; Vidal Phan. Cuming. Philip. (1885) 137, Rev. Pl. Vasc. Filip. (1886) 218; Rolfe in Gard. Chron. III 23 (1898) 380, *f. 143*; Mast. in Gard. Chron. III 30 (1901) 312, *fig.*; Macfarl. in Engl. Pflanzenreich 36 (1908) 54; Merr. Sp. Blancoanae (1918) 160.

Luzon (Ifugao, Ilocos Norte, Tayabas, Rizal, Camarines, Albay, Sorsogon). In damp forests, altitude 600 to 1,500 m. Endemic.

Local names: Kako (Bik.); salud-sálud (Ilk.).

EXCLUDED SPECIES

NEPENTHES CRISTATA Brongn. in Ann. Sci. Nat. I 1 (1824) 48; Hook. f. in DC. Prodr. 17 (1873) 105; F.-Vill. Novis. App. (1880) 173.

The type of this species was from Madagascar; the Philippine specimen collected by Née at Mauban, Tayabas Province, Luzon, cited by Brongniart in the original description, is unquestionably *Nepenthes alata* Blanco.

NEPENTHES GRACILIS Korth.; F.-Vill. Novis. App. (1880) 173.

NEPENTHES RAFFLESIANA Jack; Gibbs in Journ. Linn. Soc. Bot. 42 (1914) 127.

The *Cuming* specimen in the Herbarium of the British Museum cited by Miss Gibbs as Philippine was certainly from Singapore or the Malay Peninsula, not from the Philippines.

DROSERACEAE

1. *DROSERA* Linnaeus

DROSERA BURMANNI Vahl Symb. 3 (1794) 50; F.-Vill. Novis. App. (1880) 78; Diels in Engl. Pflanzenreich 26 (1906) 75, t. 27, E-G; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 263.

Luzon (Bontoc), *F. B. 10995 Curran*. In peaty soil, open places, altitude about 700 m. India to Japan southward to northern Australia.

DROSERA INDICA Linn. Sp. Pl. (1753) 282; DC. Prodr. 1 (1824) 319; Miq. Fl. Ind. Bat. 1² (1858) 120; Hook. f. & Th. in Journ. Linn. Soc. Bot. 2 (1858) 82; F.-Vill. Novis. App. (1880) 78; Diels in Engl. Pflanzenreich 26 (1906) 77, f. 29; Merr. Sp. Blancoanae (1918) 161.

Drosera hexagynia Blanco Fl. Filip. (1837) 226, ed. 2 (1845) 159, ed. 3, 1 (1877) 186.

Luzon (Pangasinan, Rizal), Culion, *B. S. 4908, 13753, 41309 Ramos, Lohrer 1637, 6756*. In open wet grassy places, old rice lands, etc., at low and medium altitudes; rare or at least very local. India to Japan southward to Australia.

Local name: Bintipálo (Tag.).

DROSERA PELTATA Sm. in Willd. Sp. Pl. 1 (1797) 1546, Exot. Bot. 1 (1805) 79, t. 41; DC. Prodr. 1 (1824) 319; F.-Vill. Novis. App. (1883) 350; Ceron Cat. Pl. Herb. Manila (1892) 75 (var. *lunata* C. B. Clarke); Diels in Engl. Pflanzenreich 26 (1906) 110; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 275, 5 (1910) Bot. 350.

Luzon (Bontoc, Benguet, Zambales), common on open grassy slopes in thin pine forests, altitude 1,000 to 1,800 m, and on open heaths, Mt. Halcon, Mindoro, at 2,400 m. India to Japan southward to Tasmania.

Local names: Bain (Ig.); gúmgumayéng (Bon.); sanabúgan (Ig.).

DROSERA SPATHULATA Labill. Nov. Holl. Pl. Sp. 1 (1804) 79, t. 106, f. 1; Miq. Fl. Ind. Bat. 1² (1858) 130; F.-Vill. Novis. App. (1880) 78; Vidal Phan. Cuming. Philip. (1885) 111; Diels in Engl. Pflanzenreich 26 (1906) 83, f. 31, A-B; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 274.

Luzon (Albay, Mayon Volcano), Mindoro (Mt. Halcon), *Merrill 5784, B. S. 2929 Mcarns*. On open heaths, altitude 1,200 to 2,400 m. Japan, southern China, Formosa, Borneo, eastern Australia, and New Zealand.

EXCLUDED FAMILY

TRISTICHA BIFARIA Presl Rel. Haenk. 1 (1827) 86; Wedd. in DC. Prodr. 17 (1873) 46; F.-Vill. Novis. App. (1880) 173.

This is the only representative of the Podostemonaceae that has been credited to the Philippines, localized by Presl as "Hab. in insulis Philippinis," an error later corrected by Presl himself.

CRASSULACEAE

1. **SEDUM** Tournefort

SEDUM AUSTRALE Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 16, Philip. Journ. Sci. 5 (1910) Bot. 351.

Luzon (Benguet, Bontoc). Widely scattered on bowlders, cliffs, etc., altitude 1,200 to 2,000 m. Endemic.

2. **BRYOPHYLLUM** Salisbury

BRYOPHYLLUM PINNATUM (Lam.) Kurz. in Journ. As. Soc. Beng. 40² (1876) 309; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 351, Fl. Manila (1912) 218, Sp. Blancoanae (1918) 161.

Cotyledon pinnatum Lam. Encycl. 2 (1786) 171.

Bryophyllum calycinum Salisb. Parad. Lond. (1805) t. 3; Wight in Hook. Bot. Miscel. 3 (1833) 100, t. 31; F.-Vill. Novis. App. (1880) 78; A. Gray Bot. Wilkes Explor. Exped. (1854) 690; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 84.

Cotyledon paniculata Blanco Fl. Filip. (1837) 381, non Linn. f.

Bryophyllum germinans Blanco op. cit. ed. 2 (1845) 220, ed. 3, 2 (1878) 47, t. 147.

Northern Luzon to Mindanao, in open settled areas, dry second-growth forests, etc., sometimes planted; locally abundant. Of prehistoric introduction from tropical Asia or Malaya, now pantropic.

Local names: Abisrána (Ilk.); angélica (Sp.); aritana (Bik.); ba-langbáng (If.); inǵinǵa (Ig.); kapal-kapal (Sul.); karitana (Bis.); katatakaká (Tag.); kokoeng (Bon.); lapak-lapak (Sul.); putpútok (Bon.); siempreviva (Sp.).

3. **KALANCHOE** Adanson

KALANCHOE LACINIATA (Linn.) DC. Pl. Grass. (1799-1829) t. 100, Prodr. 3 (1828) 395; Miq. Fl. Ind. Bat. 1¹ (1856-57) 728; F.-Vill. Novis. App. (1880) 78; Hook. f. & Th. in Journ. Linn. Soc. Bot. 2 (1858) 91; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 146; Merr. Fl. Manila (1912) 218, Sp. Blancoanae (1918) 161.

Cotyledon laciniata Linn. Sp. Pl. (1753) 430.

Cotyledon serrata Blanco Fl. Filip. (1837) 382, non Linn.

Bryophyllum serratum Blanco op. cit. ed. 2 (1845) 220, ed. 3, 2 (1878) 48.

Cotyledon lanceolata Blanco Fl. Filip. (1837) 382, non Forsk.

Bryophyllum triangulare Blanco op. cit. ed. 2 (1845) 221, ed. 3, 2 (1878) 48.

Occasionally cultivated in gardens or about dwellings, an introduced plant in the Philippines, *Merrill Sp. Blancoanae* 983, 900. India to tropical Africa, China and Java, often planted only.

Local name: Siempreviva (Sp.).

KALANCHOE SPATHULATA (Poir.) DC. Pl. Grass. (1799-1829) *t.* 65, Prodr. 3 (1828) 395; Miq. Fl. Ind. Bat. 1^a (1856-57) 728; F.-Vill. Novis. App. (1880) 78; Vidal Rev. Pl. Vasc. Filip. (1886) 125; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 59, 5 (1910) Bot. 351. *Cotyledon spathulata* Poir. in Lam. Encycl. Suppl. 2 (1811) 373.

Luzon (Ilocos Norte, Lepanto, Benguet, Bataan). On cliffs, boulders, etc., low altitudes to 1,500 m. India to China and Java.

Local name; Spelda (Ig.).

SAXIFRAGACEAE

1. ASTILBE Hamilton

ASTILBE APOENSIS Hallier f. in Meded. Rijks Herb. 37 (1918) 7.

Mindanao (Davao), *Elmer 11508*. On mossy boulders along streams, altitude about 1,600 m. Endemic.

Local name: Parapingdang (Bag.).

Hallier's type was an unnumbered specimen from Elmer's Mt. Apo collection; Elmer's original notes show that his Mt. Apo collection of *Astilbe* is his number 11508. I have seen no specimens.

ASTILBE PHILIPPINENSIS Henry in Gard. Chron. (1902) 2: 155; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 351.

Astilbe rivularis Vidal Rev. Pl. Vasc. Filip. (1886) 124, non Ham.

Astilbe speciosa F.-Vill. Novis. App. (1883) 351, non Jungh.

Luzon (Bontoc, Benguet). Characteristic of the upper pine region, extending into the mossy forest, altitude 1,200 to 2,300 m. Endemic.

Local names: Hagmán (Ig.); káuan (Ig.); ñgáboi (Ig.); túgtugi (Bon.).

2. DEUTZIA Thunberg

DEUTZIA ACUMINATA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 266.

Luzon (Nueva Ecija), *B. S. 26441 Ramos & Edaño*. On forested slopes at medium altitudes. Endemic.

DEUTZIA PULCHRA Vidal Rev. Pl. Vasc. Filip. (1886) 124; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 351.

Luzon (Ifugao, Bontoc, Benguet). In ravines, thickets, and on exposed ridges in the mossy forest, altitude 1,200 to 2,400 m; common. Formosa.

Local names: Alátin (Bon.); aludís (Bon.); amogíng (Ig.); anatil (Ig.); ketkét (Ig.).

3. HYDRANGAEA Gronovius

HYDRANGAEA GLANDULOSA Elm. Leaf. Philip. Bot. 2 (1908) 473.

Hydrangea cuneatifolia Elm. op. cit. 8 (1915) 2825.

Luzon (Ifugao, Benguet, Bontoc, Laguna, Rizal), Leyte, Negros, Mindanao (Davao), *Elmer 9846, 10732, Sandkuhl 317, Vanoverbergh 1120, B. S. 15281 Ramos, 37768, 40754 Ramos & Edaño, 19659 McGregor, 31847 Santos*. Usually in the mossy forest, altitude 900 to 2,200 m; rare and local. Endemic.

Local names: Bañgáuan (Ig.); kupkut (Bon.); takir (Bag.).

HYDRANGEA LOBBII Maxim. in Mém. Acad. Sci. St. Pétersb. VII 10 (1867) 15; Rolfe in Journ. Bot. 23 (1885) 212; Vidal Rev. Pl. Vasc. Filip. (1886) 124; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 59, 2 (1907) Bot. 275, 5 (1910) Bot. 351.

Northern Luzon to Mindanao, in the mossy forest on most of the higher mountains, altitude 1,000 to 2,400 m. *Lobb 446*, on which the species was based, was from Luzon, not from Java. Endemic.

Local names: Batibati (Bag.); luk (Bon.); sugúsug (Bon.); umum (Ig.).

HYDRANGEA PUBIRAMEA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 267.

Luzon (Benguet, Tayabas, east coast), *B. S. 26521, 40337, 40374 Ramos & Edaño*. In wet forests, altitude 300 m or above. Endemic.

Var. **PARVIFOLIA** Merr. op. cit. 268.

Luzon (Nueva Ecija), *B. S. 26511 Ramos & Edaño*. In damp forests at or above 300 m altitude. Endemic.

HYDRANGEA SUBINTEGRA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 408.

Batan Islands (Batan), *B. S. 3776 Fénix*. In thickets or open forests. Endemic.

Local name: Gagádang (Iv.).

EXCLUDED SPECIES

HYDRANGEA OBLONGIFOLIA Blume; F.-Vill. Novis App. (1883) 351.

Some horticultural forms of *Hydrangea hortensia* Sieb. are cultivated in Baguio and are occasionally brought to Manila.

4. DICHROA Loureiro

DICHROA PHILIPPINENSIS Schltr. in Engl. Bot. Jahrb. 52 (1914) 122.

Dichroa febrifuga F.-Vill. Novis. App. (1880) 77, Vidal Phan. Cuming. Philip. (1885) 111, non Lour.

Luzon (Apayao, Ifugao, Benguet, Laguna, Tayabas, Camarines), Mindoro, Catanduanes, Camiguin de Misamis, Mindanao. In the mossy forest on the higher mountains. Endemic.

Local names: Kalantud (Tag.); pamagtiñgan (Bag.).

DICHROA PLATYPHYLLA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 13.

Luzon (Albay, Sorsogon), Catanduanes, Mindoro, Leyte, *B. S. 23416, 30454, 41010 Ramos, 6453 Robinson, Wenzel 1018*. In damp forests at medium altitudes. Endemic.

5. ITEA Gronovius

ITEA MACROPHYLLA Wall. in Roxb. Fl. Ind. 2 (1824) 419; DC. Prodr. 4 (1830) 6; Hook. f. & Th. in Journ. Linn. Soc. Bot. 2 (1858) 77; Rolfe in Journ. Bot. 23 (1885) 212; Vidal Rev. Pl. Vasc. Filip. (1886) 124; Stapf in Trans. Linn. Soc. Bot. 4 (1894) 148; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 59, 5 (1910) Bot. 351; Hallier f. in Meded. Rijks Herb. 37 (1918) 4.

Itea luzonensis Elm. Leaf. Philip. Bot. 2 (1908) 528.

Northern Luzon (Abra) to Mindanao. In forests at medium altitudes, ascending to 1,350 m. Himalayan region to Japan southward to Java Sumatra, Sumbawa, and Borneo.

Local names: Danipog (Ig.); kodai (Ig.); kogos (Ting.).

ITEA MAESAEFOLIA Elm. Leaf. Philip. Bot. 2 (1908) 528.

Luzon (Laguna), Leyte, *Elmer* 7566, *Baker* 258, 259, *F. B.* 15375 *Tamesis*, 16908 *Rosenbluth*. In forests at 1,000 to 1,300 m altitude. Endemic.

6. QUINTINIA de Candolle

QUINTINIA APOENSIS (Elm.) Schltr. in Engl. Bot. Jahrb. 52 (1914) 125.

Dedeia apoensis Elm. Leaf. Philip. Bot. 2 (Aug. 8, 1910) 682.

Curraniodendron dedeoides Merr. in Philip. Journ. Sci. 5 (Aug. 19, 1910) Bot. 177.

Curraniodendron apoense Merr. in Philip. Journ. Sci. 10 (1915) Bot. 5.

Dedeia cinerea Elm. Leaf. Philip. Bot. 8 (1915) 2824.

Negros, Leyte, Mindanao (Agusan, Bukidnon, Davao), *Elmer* 10627, 11524, 13696, 13749, *Wenzel* 1056, *B. S.* 15283 *Ramos*, 38916 *Ramos & Edaño*, *F. B.* 13634 *Curran & Foxworthy*. In the mossy forest on the higher mountains, altitude 1,300 to 2,200 m. Endemic.

The genus otherwise is known only from New Guinea, New Caledonia, Australia, and New Zealand; in all about fifteen species are now recognized.

Local names: Bitaoogan (Mbo.); kalipayan (Mbo.); mamagras (Bag.).

7. POLYOSMA Blume

POLYOSMA APOENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1633.

Mindanao (Davao, Surigao), *Elmer* 10797, *F. B.* 26479 *Mallonga*, 26236 *Ponce & Mallonga*. In forests, 100 to 1,200 m altitude. Endemic.

Local names: Magsañgad (Tagb.); taypo (P. Bis.).

POLYOSMA CYANEA Elm. Leaf. Philip. Bot. 5 (1913) 1637.

Mindanao (Agusan, Bukidnon), *Elmer* 13670, *B. S.* 38883 *Ramos & Edaño*. On forested peaks and ridges, altitude about 1,300 m. Endemic.

Local name: Ambat (Mbo.).

POLYOSMA GITINGENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1634.

Sibuyan, Leyte, Panay, Biliran, *Elmer* 12437, 12206, *Wenzel* 924, *B. S.* 18731 *McGregor*, 30640 *Ramos & Edaño*. In forests, altitude 500 to 900 m. Endemic.

Local name: Baybatuan (P. Bis.).

POLYOSMA LAGUNENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 5.

Luzon (Laguna), Catanduanes, *B. S.* 20393, 14960, 10056, 30558, 30563 *Ramos*, 23021 *McGregor*, *F. B.* 13185 *Curran*, 26824 *Catalan*. In forests at low and medium altitudes. Endemic.

POLYOSMA LINEARIBRACTEA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 6.

Luzon (Ifugao, Bontoc), *B. S.* 19656 *McGregor*, 37645, 37767 *Ramos & Edaño*. In forests, probably at or above an altitude of 1,400 m. Endemic.

POLYOSMA LONGIPETIOLATA Merr. in Philip. Journ. Sci. 14 (1919) 400.

Luzon (Ilocos Norte), *B. S. 33259 Ramos*. In forests, altitude about 1,000 m. Endemic.

POLYOSMA PHILIPPINENSIS Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 16, Philip. Journ. Sci. 1 (1906) Suppl. 59, 5 (1910) Bot. 352; Elm. Leaf. Philip. Bot. 5 (1913) 1633.

Luzon (Benguet, Zambales, Tayabas, Bataan, Laguna, Camarines, Sorsogon), Mindoro, *F. B. 828, 2099, 2079, 1811 Borden, B. S. 15061, 23535 Ramos, Merrill 3877, Elmer 9137*. In forests at medium altitudes, ascending to 2,000 m. Endemic.

Local names: Agusíp (Tag.); magbut (Ig.); matáng-árau (Sbl.).

POLYOSMA PIPERI Merr. in Philip. Journ. Sci. 7 (1912) Bot. 271; Elm. Leaf. Philip. Bot. 5 (1913) 1633.

Leyte, Samar, Mindanao (Surigao, Bukidnon), *Piper 519, Wenzel 767, 671, B. S. 15325 Ramos*. In forests at low and medium altitudes. Endemic.

POLYOSMA PULGARENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1636.

Palawan, *Elmer 13187*. In thickets, exposed ridges and peaks on Mt. Pulgar, altitude about 1,250 m. Endemic.

POLYOSMA RETUSA C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 321; Elm. Leaf. Philip. Bot. 5 (1913) 1633.

Luzon (Tayabas, east coast), *B. S. 9362 Robinson, 28477 Ramos & Edaño*. In the mossy forest on Mt. Binuang, altitude about 840 m. Endemic.

POLYOSMA URDANETENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1637.

Mindanao (Agusan), *Elmer 13793*. In the mossy forest on Mt. Urdaneta, altitude about 1,900 m. Endemic.

Local name: Yañgitosan (Mbo.).

POLYOSMA VERTICILLATA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 272; Elm. Leaf. Philip. Bot. 5 (1913) 1633.

Luzon (Benguet, Bontoc, Lepanto), *Merrill Phil. Pl. 772, Williams 1526, Elmer 8798, Vanoverbergh 1141, B. S. 31706 Santos, 37789, 37817 Ramos & Edaño, F. B. 25134 Leaño*. In forests, altitude 1,650 to 2,400 m. Endemic.

Local name: Buduan (Ig.).

POLYOSMA VILLOSA Merr. in Philip. Journ. Sci. 14 (1919) 399.

Luzon (Ilocos Norte), *B. S. 33340 Ramos*. In forests, altitude about 900 m. Endemic.

PITTOSPORACEAE

1. PITTOSPORUM Banks

PITTOSPORUM ACUMINATISSIMUM Merr. in Philip. Journ. Sci. 14 (1919) 402.

Panay, *B. S. 30745 Ramos & Edaño*. In forests at medium altitudes. Endemic.

PITTOSPORUM EPIPHYTICUM Merr. in Philip. Journ. Sci. 3 (1908) Bot. 138.

Luzon (Camarines), Leyte, Mindanao (Lanao), *Merrill Phil. Pl. 1501, Wenzel 807, 927, Clemens 1040, B. S. 15225 Ramos*. Epiphytic or pseudo-epiphytic in damp forests, altitude 500 to 800 m. Endemic.

Local name: Bualau (Bik.).

PITTOSPORUM EUPHLEBIUM Merr. in Philip. Journ. Sci. 17 (1920) 258.

Mindoro, Panay, Mindanao (Bukidnon), *B. S. 35416 Martelino & Edaño, 38735 Ramos & Edaño, 40958 Ramos*. On forested slopes at low and medium altitudes. Endemic.

PITTOSPORUM GLABERRIMUM Merr. in Philip. Journ. Sci. 14 (1919) 402.

Luzon (Ilocos Norte), *B. S. 33309 Ramos*. On forested slopes, altitude about 1,000 m. Endemic.

PITTOSPORUM LITTORALE Merr. in Philip. Journ. Sci. 5 (1910) Bot. 179.

Mindoro, Burias, Siquijor, Negros, *F. B. 9845 Merritt, 16999 Everett, 25896 Tamesis & Azurin, B. S. 21273 Escritor, Merrill 11533*. In thickets along the seashore. Endemic.

Local name: Tikala (C. Bis.).

PITTOSPORUM MEGACARPUM Merr. in Philip. Journ. Sci. 5 (1910) Bot. 179.

Pittosporum subverticillatum Elm. Leaf. Philip. Bot. 8 (1915) 2795.

Babuyan Islands, Mindoro, Masbate, Sibuyan, Mindanao, *F. B. 12557 Rosenbluth, 5392 Merritt, B. S. 37461 Ramos & Edaño, Elmer 10826, 11882, 12054*. In forests at low and medium altitudes; allied to *P. odoratum* Merr. Endemic.

Local names: Amomu (P. Bis.); amomunpon (P. Bis.); tapotása (Bag.).

PITTOSPORUM OBSCURINERVE Merr. in Philip. Journ. Sci. 17 (1920) 257.

Mindanao (Surigao), *B. S. 34441 Ramos & Pascasio*. In forests, altitude about 600 m. Endemic.

PITTOSPORUM ODORATUM Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 16; Philip. Journ. Sci. 1 (1906) Suppl. 60, 2 (1907) Bot. 275, 3 (1908) Bot. 406.

Pittosporum glabratum F.-Vill. Novis. App. (1880) 13; Vidal Sinopsis Atlas (1883) 13, t. 8, f. B, non Lindl.

Northern Luzon to Mindanao. In forests at medium altitudes, ascending to 1,600 m. Endemic.

Local names: Botúnis (Ilk.); bulálang (Tag.); dail (Bon.); kamiding (Ig.); labagáñgon (Buk.), labáñgon (Buk.); libagañgon (Buk.); tum-pagásog (Bag.).

PITTOSPORUM PENTANDRUM (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 19, 35 (1906) 16, Philip. Journ. Sci. 1 (1906) Suppl. 57, 5 (1910) Bot. 352, Fl. Manila (1912) 219, Sp. Blancoanae (1918) 162.

Aquilaria pentandra Blanco Fl. Filip. (1837) 373; Meisn. in DC. Prodr. 14 (1857) 602.

Limonia laureola Blanco Fl. Filip. ed. 2 (1845) 251, ed. 3, 2 (1878) 101, t. 128.

Bursaria inermis Azaola in Blanco Fl. Filip. ed. 2 (1845) 124, ed. 3, 1 (1877) 222.

Pittosporum brachysepalum Turcz. in Bull. Soc. Nat. Mosc. 27² (1854) 366; Rolfe in Journ. Bot. 23 (1885) 210, Rev. Pl. Vasc. Filip. (1886) 50.

Pittosporum fernandezii Vidal ex F.-Vill. Novis. App. (1880) 13, Cat. Pl. Prov. Manila (1880) 17, Sinopsis Atlas (1883) 13, t. 8, f. A, Rev. Pl. Vasc. Filip. (1886) 50.

Pittosporum ferrugineum F.-Vill. Novis. App. (1880) 13; Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 18, non Ait.

Northern Luzon to Palawan and Mindanao, very common in second-growth forests, parang, etc., at low and medium altitudes, ascending to 1,400 m. Endemic.

Local names: Antoan (C. Bis.); balinkauáyan (P. Bis.); basuít (Ilk.); bolonkóyan (P. Bis.); darayau (Tagb.); dili (Gad.); lasuít (Ig.); mamáli (Tag.); mamális (Pang., Tag.); marabiñga (Tagb.); oplái (Ilk.); pañg-antóan (C. Bis.); pañgatoan (C. Bis.); pasgik (Ig.); pasik (Bon.); saboágon (P. Bis.); taliú (Sbl.); uplái (Ilk.).

PITTOSPORUM PSEUDOSTIPITATUM Merr. in Philip. Journ. Sci. 14 (1919) 401.

Luzon (Ilocos Norte), *B. S. 33127* Ramos. On dry slopes, altitude about 700 m. Endemic.

PITTOSPORUM PULGARENSE Elm. Leaf. Philip. Bot. 5 (1913) 1825.

Palawan, *Elmer 13188*, *F. B. 3877* Curran. On the exposed peak of Mt. Pulgar, altitude about 1,250 m; allied to *Pittosporum pentandrum* Merr. rather than to *P. odoratum* Merr., the mature fruits less than 1 cm long. Endemic.

PITTOSPORUM RAMIFLORUM Zoll. ex Miq. Fl. Ind. Bat. 1² (1858) 122; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 180.

Glyaspermum ramiflorum Zoll. & Mor. in Nat. Geneesk. Arch. Ind. 2 (1845) 11.

Pittosporum clementis Merr. in Philip. Journ. Sci. 3 (1908) Bot. 137.

Negros, Cebu, Mindanao (Lanao, Bukidnon, Davao), *Merrill Phil. Pl. 228*, *F. B. 25200* Alvarez, *B. S. 38544* Ramos & Edaño, *Clemens* 768, 892, *Elmer* 11685, 11316, 11403, 11959. In forests, altitude 700 to 1,900 m. Java to Celebes and the Moluccas.

Local names: Duong (Bag.); kolinus-hamolaon (C. Bis.); malagus (Bag.); riin (Lan.).

PITTOSPORUM RAMOSII Merr. in Philip. Journ. Sci. 5 (1910) Bot. 180.

Luzon (Abra, Bontoc, Lepanto), *B. S. 7211* Ramos, 38019, 38016 Ramos & Edaño, *F. B. 5683* Klemme, 14502 Darling. In forests, altitude about 1,500 m. Endemic.

Local names: Albon (Ig.) tungtuñga (Bon.).

PITTOSPORUM RESINIFERUM Hemsl. in Kew Bull. (1894) 344; Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 17, Philip. Journ. Sci. 1 (1906) Suppl. 60, 2 (1907) Bot. 275, 5 (1910) Bot. 352.

Luzon (Bontoc to Sorsogon), Mindoro, Catanduanes. Common, growing as an epiphytic or pseudoepiphytic plant on trees in the mossy forest, altitude 900 to 2,400 m. Endemic; the Celebes specimens referred here by Koorders do not represent Hemsley's species.

Var. **ORBICULATUM** Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 18.

Luzon (Pampanga), *Merrill 3919*. At the summit of Mt. Arayat, altitude about 800 m. Endemic.

Local names: Abkél (Ig.); abkól (Ig.); apísang (Ig.); botiak (Ig.); daél (Ig.); diñgo (Ig.); kabilan (Ig.); kalapakab (Bon.); kiligto (Ig.); lañgis (Ig.); obkol (Ig.); pilai (Bon.); sagága (Ting.).

EXCLUDED SPECIES

PITTOSPORUM FLORIBUNDUM W. & A.; F.-Vill. Novis. App. (1880) 13.

2. CITRIOBATUS Cunningham

CITRIOBATUS JAVANICUS Boerl. & Koord. in Ic. Bogor. 1 (1901) t. ??; Merr. in Philip. Journ. Sci. 14 (1919) 401.

Luzon (Batangas), *B. S. 22343 Ramos, F. B. 28269 Sulit*. In thickets at low altitudes. Java.

With the exception of this all the species of this small genus are Australian.

CUNONIACEAE

1. SPIRAEOPSIS Miquel

SPIRAEOPSIS CELEBICA (Blume) Miq. Fl. Ind. Bat. 1¹ (1856-57) 719; Ceron Cat. Pl. Herb. Manila (1892) 57; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 101.

Cunonia celebica Blume Bijdr. (1826) 868.

Spiraeopsis philippinensis Elm. Leaf. Philip. Bot. 8 (1915) 2826.

Luzon (Camarines), Leyte, Negros, Camiguin de Misamis, Mindanao (Agusan, Davao), *Vidal 2719, Elmer 10075, 11402, 14157, Wenzel 1087, B. S. 14684 Ramos*. In forests on the higher mountains, altitude 500 to 1,500 m. Celebes.

Local names: Bognág (Mbo.); kaliapi (Bag.).

2. WEINMANNIA Linnaeus

WEINMANNIA CAMIGUINENSIS Elm. Leaf. Philip. Bot. 7 (1915) 2607.

Luzon (Sorsogon), Catanduanes, Leyte, Camiguin de Misamis, Mindanao (Lanao), *Elmer 14228, 14918, 17293, B. S. 23494, 23695, 30537 Ramos, Wenzel 997, 1088*. In forests, altitude 700 to 1,200 m; allied to *Weinmannia blumei* Planch. Endemic.

WEINMANNIA HUTCHINSONII Merr. in Philip. Journ. Sci. 2 (1907) Bot. 275.

Luzon (Zambales, Pampanga, Sorsogon), Mindoro, Mindanao (Lanao, Jolo), *Merrill 5753, Loher 5998, B. S. 23673 Ramos, F. B. 3782 Merritt, Clemens 519, 9381, 9358*. In forests, altitude 650 to 1,200 m; very closely allied to the Malayan *Weinmannia blumei* Planch. Endemic.

WEINMANNIA LUCIDA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 7.

Luzon (Rizal, Laguna), *Loher 5991, B. S. 23806 Ramos, Merrill Phil. Pl. 1109*. In damp forests at medium altitudes. Endemic.

WEINMANNIA LUZONIENSIS Vidal Rev. Pl. Vasc. Filip. (1886) 125; Ceron Cat. Pl. Herb. Manila (1892) 75; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 60.

Weinmannia sundana F.-Vill. Novis. App. (1883) 351, non Miq.

Weinmannia luzoniensis Vid. var. *puberula* Elm. Leaf. Philip. Bot. 8 (1919) 3078.

Luzon (Ilocos Norte, Bontoc, Benguet, Laguna, Rizal, Bataan, Tayabas), *Vidal 314, B. S. 9399 Robinson, 20533 Ramos, 18999 Brown, F. B. 5070 Curran, 21846 Leaño, 3133 Meyer, Merrill Phil. Pl. 830, 1739, Elmer 18066, 18024*. In forests, altitude 600 to 1,700 m. Endemic.

Local names: Bani (Tag.); itañgan (Ig.); saiu (Ig.).

WEINMANNIA NEGROSENSIS Elm. Leaf. Philip. Bot. 2 (1909) 577.

Luzon (Bataan, Sorsogon), Leyte, Negros, *Elmer 9656, Wenzel 1057, Whitford 420, F. B. 789, 1227 Borden, 2756 Meyer, B. S. 23666, 23500 Ramos*. In forests, altitude 500 to 1,200 m; very closely allied to *Weinmannia luzoniensis* Vid. Endemic.

Local name: Tañgalamos-itung (C. Bis.).

WEINMANNIA SIMPLICIFOLIA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 268.

Luzon (Bontoc, Tayabas), *Vanoverbergh 1253, B. S. 26531 Ramos & Edaño*. In forests, altitude 300 to 1,600 m. Endemic.

WEINMANNIA URDANETENSIS Elm. Leaf. Philip. Bot. 7 (1915) 2608.

Luzon (Ilocos Norte), Mindanao (Agusan), *Elmer 13701, B. S. 33268 Ramos*. In forests, altitude 1,000 to 1,700 m. Endemic.

Local names: Kalilan (Mbo.); kalion (Mbo.).

EXCLUDED GENERA

BREXIA MADAGASCARIENSIS Thouars; F.-Vill. Novis. App. (1883) 351.

PHILADELPHUS INODORUS Linn; Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 101.

HAMAMELIDACEAE

1. **EMBOLANTHERA** Merrill

EMBOLANTHERA SPICATA Merr. in Philip. Journ. Sci. 4 (1910) Bot. 263.

Palawan (Mt. Victoria), *B. S. 739 Foxworthy*. In forests along streams, altitude 250 m. An endemic monotypic genus.

2. **SYCOPSIS** Oliver

SYCOPSIS PHILIPPINENSIS Hemsl. in Hook. Ic. IV 9 (1907) sub t. 2836, Fedde Repert. 5 (1908) 342.

Croton curtiflorus Elm. Leaf. Philip. Bot. 1 (1908) 310.

Luzon (Bontoc, Benguet, Nueva Ecija, Bataan, Rizal, Batangas, Laguna), Mindoro, *Elmer 8651, Loher 4881, Vanoverbergh 2213, Santos 13, F. B. 25506 Garcia, 6246 Curran, B. S. 26419, 29326 Ramos & Edaño,*

39604 *Ramos, Phil. Pl. 1999 Merrill*. On forested ridges, altitude 1,000 to 1,700 m. Endemic.

Local name: Parukápok (Neg.).

ROSACEAE

1. ERIOBOTRYA Lindley

ERIOBOTRYA AMBIGUA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 19, Philip. Journ. Sci. 1 (1906) Suppl. 60.

Luzon (Ilocos Norte, Ilocos Sur, Benguet, Rizal, Bataan), *F. B. 2796 Meyer, 22916 Leaño, 10927 Curran, B. S. 21954 Santos, 5586, 33152 Ramos, 29653 Ramos & Edaño, Whitford 1155, 1168, 1809, Merrill Phil. Pl. 724*. In forests, altitude 800 to 2,000 m. Endemic.

Local names: Anagép (Ilk.); buláñgan (Ig.); panglungbóyen (Ilk.).

ERIOBOTRYA OBLONGIFOLIA Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 102.

Mindanao (Misamis), *F. B. 4680 Mearns & Hutchinson*. In forests, altitude about 1,800 m. Endemic.

ERIOBOTRYA PHILIPPINENSIS Vidal Rev. Pl. Vasc. Filip. (1886) 123; Ceron Cat. Pl. Herb. Manila (1892) 74.

Luzon (Zambales, Nueva Ecija, Tayabas, east coast), *Vidal 1350, 1353, B. S. 5008 Ramos, 26443 Ramos & Edaño, F. B. 6234 Curran & Merritt, 19739 Wood*. In forests at medium altitudes. Endemic.

Local name: Marabaráni (Neg.).

EXCLUDED SPECIES

ERIOBOTRYA JAPONICA (Thunb.) Lindl.

The loquat is occasionally planted, but is not established and does not thrive at low altitudes. It promises to be successful at medium and higher altitudes.

2. PHOTINIA Lindley

PHOTINIA LUZONENSIS Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 18, Philip. Journ. Sci. 1 (1906) Suppl. 60, 2 (1907) Bot. 276.

Luzon (Ilocos Norte, Benguet, Zambales, Rizal, Bataan), Mindoro, *Merrill 3223, 3714, 6205, Phil. Pl. 790, F. B. 22985 Adduru, 2120 Borden, Williams 418, Elmer 6996, Whitford 1189, B. S. 33379, 40761 Ramos, 40319 Ramos & Edaño*. On exposed ridges on the higher mountains, altitude 1,200 to 2,400 m. Endemic.

Local name: Bitgui (Ig.).

PHOTINIA SERRULATA Lindl. in Trans. Linn. Soc. 13 (1821) 103, excl. syn. *Crataegus glabra* Thunb.; Hemsl. in Trans. Linn. Soc. Bot. 33 (1887) 263; Rehder & Wilson in Sargent Pl. Wils. 1 (1912) 184; Merr. in Philip. Journ. Sci. 14 (1919) 403.

Luzon (Lepanto, Benguet), Mindanao (Bukidnon), *B. S. 4435 Mearns, 31650 Santos, 38908, 40259 Ramos & Edaño, Sandkuhl 258*. In the mossy forest, altitude about 2,400 m. China, Formosa.

Local name: Itañgan (Ig.).

Photinia glabra (Thunb.) Maxim. (*Crataegus glabra* Thunb.) of Japan is an introduced and cultivated species in Baguio (*Sandkuhl 217*).

3. RUBUS Tournefort

RUBUS BENGUETENSIS Elm. Leaf. Philip. Bot. 2 (1908) 449; Focke in Bibl. Bot. 17⁷² (1910) 66.

Luzon (Benguet), *Loher 2237, Elmer 8383*. In thickets on limestone formations, altitude about 1,300 m. Endemic.

Local name: Kobat (Ig.).

RUBUS COPELANDII Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 194, 5 (1910) Bot. 352; Elm. Leaf. Philip. Bot. 2 (1908) 457; Focke in Bibl. Bot. 17⁷² (1910) 33.

Luzon (Bontoc, Lepanto, Benguet), *Merrill 4810, 6560, Phil. Pl. 860, Clemens 9120, B. S. 4309 Mearns, 37615, 40467 Ramos & Edaño, F. B. 16328 Curran, Merritt, & Zschokke*. In the mossy forest, altitude 1,700 to 2,300 m. Endemic.

Local name: Pinit (Bon.).

RUBUS CUMINGII O. Kuntze Meth. Rub. (1879) 76; Focke in Bibl. Bot. 17⁷² (1910) 58, f. 21.

? *Rubus sundaicus* Presl Epim. (1851) 197; Rolfe in Journ. Bot. 23 (1885) 212; Vidal Rev. Pl. Vasc. Filip. (1886) 122, non Blume.

Philippines, without definite locality (*Cuming*). Endemic.

RUBUS EDANOII Merr. in Philip. Journ. Sci. 13 (1918) Bot. 14.

Luzon (Nueva Ecija), *B. S. 26505 Ramos & Edaño*. In the mossy forest. Endemic.

RUBUS ELLIPTICUS Sm. in Rees Cyclop. 30 (1819) No. 16; Elm. Leaf. Philip. Bot. 2 (1908) 456; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 352; Focke in Bibl. Bot. 17⁷² (1911) 198 (var. *insulanus* Focke).

Luzon (Benguet), *Elmer 5795, 8633, Merrill 6562, Phil. Pl. 850, B. S. 5832 Ramos, 38106, 37714 Ramos & Edaño, F. B. 958 Barnes*. In thickets and on open slopes, altitude 1,300 to 1,600 m. India to Burma and Yunnan; introduced and naturalized in Jamaica.

Local names: Búnut (Bon.); kokobód (Ig.).

RUBUS ELMERI Focke in Bibl. Bot. 17⁷² (1909) 112; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 352.

Rubus rugosus Elm. Leaf. Philip. Bot. 2 (1908) 455, non Sm.

Luzon (Bontoc, Benguet), *Elmer 5792, Merrill 4651, 6542, Phil. Pl. 857, B. S. 31984 Santos, 8337 McGregor, 5430 Ramos, For. Bur. 949 Barnes, 14161 Merritt*. Open slopes, altitude 1,300 to 2,200 m. Endemic.

Local names: Búnut (Bon.); subit (Ig.).

RUBUS FRAXINIFOLIUS Poir. in Lam. Encycl. 6 (1804) 242; Miq. Fl. Ind. Bat. 1¹ (1855) 376; F.-Vill. Novis. App. (1880) 77; Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 122; Stapf in Trans. Linn. Soc. Bot. 4 (1894) 146; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 60, 5 (1910) Bot. 353, Interpret. Herb. Amb. (1917) 246; Perk. Frag. Fl. Philip. (1904) 118; Elm. Leaf. Philip. Bot. 2 (1908) 460; Focke in Bibl. Bot. 17⁷² (1911) 150, f. 63 (subsp. *celebicus* Focke).

Rubus celebicus Blume Bijdr. (1826) 107; Presl Epim. (1851) 196.

Rubus rosaefolius Vidal Sinopsis Atlas (1883) 25, t. 46, f. D, non Sm.

Northern Luzon to Mindanao. In damp forests at low and medium altitudes, ascending to 1,800 m. Sumatra to New Guinea, Formosa; introduced in Brazil.

Local names: Balaun̄gan (Ig.); barini (Ap.); buhuit (If.); kalagiauāt (Buk.); lagukanata (Lan.); luting (Ig.); pagar (If.); palanau (Ig.); pinīt Ilk. pupugan (Ig.); sampinīt (C. Bis.); sapinīt (Tag.); tugas-tugas (P. Bis.); talagiáuāt (Buk.).

RUBUS HETEROSEPALUS Merr. in Philip. Journ. Sci. 20 (1922) 387.

Luzon (Bontoc), *B. S. 37609 Ramos & Edaño*. In the mossy forest, altitude 1,800 m. Endemic.

Local name: Tukong.

RUBUS LUCENS Focke in Abh. Nat. Ver. Bremen 4 (1874) 199, subsp.

CLEMENTIS (Merr.) Focke in Bibl. Bot. 17⁷² (1911) 213.

Rubus clementis Merr. in Philip. Journ. Sci. 3 (1908) Bot. 139; Elm.

Leaf. Philip. Bot. 2 (1908) 458.

Mindanao (Bukidnon, Lanao), *Clemens 740, B. S. 38964 Ramos & Edaño*. In thickets, altitude about 700 m. India to Celebes, the subspecies endemic.

Local name: Dugis (Buk.).

RUBUS LUZONIENSIS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 195;

Elm. Leaf. Philip. Bot. 2 (1908) 452; Focke in Bibl. Bot. 17⁷² (1910) 59.

Luzon (Lepanto), *Merrill 4596, B. S. 40186 Ramos & Edaño*. In the mossy forest, altitude about 2,150 m. Endemic.

RUBUS MEARNSII Elm. Leaf. Philip. Bot. 2 (1908) 448; Merr. in Philip.

Journ. Sci. 5 (1910) Bot. 353; Focke in Bibl. Bot. 17⁷² (1910) 74.

Luzon (Benguet), *B. S. 4304 Mearns, 31714 Santos, 8885 McGregor, 40494 Ramos & Edaño, F. B. 16173 Curran, Merritt, & Zschokke*. In the mossy forest, altitude about 2,400 m. Endemic.

Local name: Buatnak (Ig.).

RUBUS MERRILLII Focke in Bibl. Bot. 17⁷² (1911) 153.

Rubus fraxinifolius Poir. var. *haightii* Elm. Leaf. Philip. Bot. 2 (1908) 461; Focke op. cit. 151.

Luzon (Benguet), *Merrill 6637, Phil. Pl. 862, B. S. 4459 Mearns, 31773 Santos*. In the mossy forests, altitude about 2,500 m at Pauai. Endemic.

Local name: Búyot (Ig.).

RUBUS MOLUCCANUS Linn. Sp. Pl. (1753) 1197; Blanco Fl. Filip.

(1837) 428, ed. 2 (1845) 298, ed. 3, 2 (1878) 190, t. 393; Presl Epim. (1851) 197; Miq. Fl. Ind. Bat. 1¹ (1855) 382; F.-Vill. Novis. App. (1880) 77; Perk. Frag. Fl. Philip. (1904) 118; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 43, Philip. Journ. Sci. 1 (1906) Suppl. 60, 2 (1907) Bot. 276; Interpret. Herb. Amb. (1917) 245, Sp. Blancoanae (1918) 162; Elm. Leaf. Philip. Bot. 2 (1908) 453; Focke in Bibl. Bot. 17⁷² (1910) f. 34.

Rubus glomeratus Presl Epim. (1851) 197, F.-Vill. Novis. App. (1880) 77; Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 122, non Blume.

Rubus glomeratus Blume var. *pilcanus* Focke in Bibl. Bot. 17⁷² (1910) 91.

Rubus hasskarlii Miq. Fl. Ind. Bat. 1¹ (1855) 381; Focke in Bibl. Bot. 17⁷² (1910) 98, f. 41.

Rubus hasskarlii Miq. subsp. *dendrocharis* Focke op. cit. 99, f. 42.

Rubus angulosus Focke op. cit. 90.

Northern Luzon to Mindanao and Palawan. Common in forests at medium and higher altitudes, in very wet regions also at low altitudes. India, through Malaya to Australia and Fiji.

Local names: Bunut (Bon.); bunbunútan (Bon.); dagámit (Bis.); kinubot (Ig.); kobot (Ig.); pakauit (Bon.); salampinit (Sub.); sampínit (Sul.); sapínit (Ig., Bag.); siit (Mbo.).

RUBUS NIVEUS Thunb. Diss. Rub. (1813) 9, f. 3; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 353; Focke in Bibl. Bot. 17⁷² (1911) 182.

Rubus lasiocarpus Sm. in Rees Cyclop. 30 (1819) No. 6; Elm. Leaf. Philip. Bot. 2 (1908) 459.

Rubus niveus Thunb. subsp. *horsfieldii* Focke op. cit. 183.

Luzon (Benguet, Bontoc), *Merrill 6533*, *Phil. Pl. 883*, *Williams 1057*, *Elmer 5989*. In thickets, altitude 1,300 to 1,600 m. India, through Malaya to Timor.

RUBUS PECTINELLUS Maxim. in Bull. Acad. St. Pétersb. 17 (1871) 147; Rolfe in Journ. Bot. 23 (1885) 212; Vidal Phan. Cuming. Philip. (1885) 41, Rev. Pl. Vasc. Filip. (1886) 122; Elm. Leaf. Philip. Bot. 2 (1908) 448; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 353; Focke in Bibl. Bot. 17⁷² (1910) 22, f. 6.

Luzon (Abra, Bontoc, Benguet, Tayabas, Laguna), Mindanao (Bukidnon, Davao). Common in the mossy forest on the highest mountains. Japan.

Local names: Apukid (Bon.); bagalbalan (Bag.); bana (Ig.); kalapachap (Ig.).

RUBUS PERFULVUS Merr. in Philip. Journ. Sci. 20 (1922) 386.

Mindanao (Bukidnon), *B. S. 38566 Ramos & Edaño*. In the mossy forest, altitude about 2,000 m. Endemic.

RUBUS PHILIPPINENSIS Focke in Leaf. Philip. Bot. 5 (1913) 1617.

Mindanao (Agusan), *Elmer 13606*. In forests. Endemic.

Local name: Sampínit (Mbo.).

RUBUS PIRIFOLIUS Sm. Pl. Icon. Ined. 3 (1791) t. 61; Focke in Bibl. Bot. 17⁷² (1910) 64, f. 63; Meded. Rijks Herb. 14 (1912) 39; Hallier f. in Beihefte Bot. Centralbl. 34² (1916) 23.

Dalibarda latifolia Blume Bijdr. (1826) 1112, non *Rubus latifolia* Bab.

Rubus rotundifolius Reinw. in Miq. Fl. Ind. Bat. 1¹ (1855) 284, non Bloxam.

Rubus brevipetalus Elm. Leaf. Philip. Bot. 2 (1908) 450.

Negros, Leyte, Mindanao, *Elmer 10099*, *10672*, *Wenzel 909*, *Merrill 8214*. In forests, altitude about 900 to 1,200 m. Sumatra, Java.

Local name: Sapínit (Bag.).

RUBUS ROLFEI Vidal Phan. Cuming. Philip. (1885) 171, Rev. Pl. Vasc. Filip. (1886) 122; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 276, 3 (1908) Bot. 82, 5 (1910) Bot. 353; Elm. Leaf. Philip. Bot. 2 (1907) 454; Focke in Bibl. Bot. 17⁷² (1910) 101, f. 43.

Rubus alceaefolius Vidal Sinopsis Atlas (1883) 25, t. 46, f. C. non Poir.

Rubus rugosus A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 503, non Sm.

Luzon (Benguet, Tayabas), Mindoro, Negros. In the mossy forest on the highest mountains. Formosa.

Local name: Dutung (Ig.).

RUBUS ROSAEFOLIUS Sm. Pl. Ic. Ined. 3 (1793) t. 60; Roxb. Fl. Ind. ed. 2, 2 (1832) 518; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 501; Miq. Fl. Ind. Bat. 1¹ (1855) 375; Hook. f. Fl. Brit. Ind. 2 (1878) 341; F.-Vill. Novis. App. (1880) 77; Stapf in Trans. Linn. Soc. Bot. 4 (1894) 146; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 60, 3 (1908) Bot. 82, Sp. Blancoanae (1918) 163; Elm. Leaf. Philip. Bot. 2 (1908) 462; Focke in Bibl. Bot. 17⁷² (1911) 153, f. 65.

Rubus commersonii Poir. in Lam. Encycl. 6 (1804) 240.

Rubus jamaicensis Blanco Fl. Filip. (1837) 427, non Linn.

Rubus comintanus Blanco op. cit. ed. 2 (1845) 298, ed. 3, 2 (1878) 190, t. 416 (as *Rubus idaeus* Blanco and *R. acuminatissimus* Hassk.).

Rubus apoensis Elm. Leaf. Philip. Bot. 5 (1913) 1618.

Northern Luzon to Mindanao. In thickets and forests at low and medium altitudes, ascending in some regions to 1,900 m. Tropical and South Africa to Japan and Australia, introduced in tropical America.

Local names: Baknít (C. Bis.); daguinot (Bis.); ínit (Ilk.); lagiauat (Lan.); pínit (If., Bon.); ragini (Bik.); sagmit (Tag.); sampínit (Bag.); sapínit (Tag.); sapínit-tatána (Bag.); sapónit (Bag.); suting (Ig.).

RUBUS TAGALLUS Cham. & Schlecht. in Linnaea 2 (1827) 9; Walp. Repert. 2 (1843) 19, Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 325; Maxim. in Bull. Acad. St. Pétersb. 8 (1871) 389; Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 122; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 60; Elm. Leaf. Philip. Bot. 2 (1908) 461; Focke in Bibl. Bot. 17⁷² (1911) 157, f. 66.

Rubus rosaefolius Presl Epim. (1851) 196, non Sm.

Luzon (Bataan, Cavite, Batangas), Panay. In thickets and forests at medium altitudes; scarcely distinguishable from *Rubus rosaefolius* Sm. Formosa.

RUBUS VANOVERBERGHII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 448.

Luzon (Bontoc), *Vanoverbergh* 2683. In forests, altitude about 1,700 m. Endemic.

RUBUS VIDALII Focke in Bibl. Bot. 17⁷² (1910) 98; f. 40.

Rubus glomeratus Vidal Phan. Cuming. Philip. (1885) 111, p. p. quoad Cuming 750, non Blume.

Luzon (Tayabas, Isabela), *B. S. 8051 Ramos*, det. Focke. The type is *Cuming 750* from Mt. Banahao, Luzon. It is very close to *Rubus moluccanus* Linn. Endemic.

RUBUS ZAMBALENSIS Elm. in Leaf. Philip. Bot. 2 (1908) Bot. 451; Focke in Bibl. Bot. 17⁷² (1910) 62.

Luzon (Zambales), *F. B. 8085 Curran & Merritt*. In the mossy forest on Mt. Tapulao, altitude about 2,000 m. Endemic.

EXCLUDED SPECIES

RUBUS ALPESTRIS Blume; F.-Vill. Novis. App. (1880) 77.

RUBUS LINEATUS Reinw.; F.-Vill. l. c.

RUBUS PARVIFOLIUS Linn.; F.-Vill. l. c.

RUBUS CUMINGII Gandoger in Bull. Soc. Bot. France 65 (1918) 24 (non O. Kuntze, 1879).

The type, *Cuming 2455*, was from St. Helena, not from the Philippines. It is *R. pinnatus* Willd., introduced in 1775.

4. FRAGARIA Tournefort

FRAGARIA INDICA Andr. in Bot. Rep. t. 479; Hook. f. Fl. Brit. Ind. 2 (1878) 343; F.-Vill. Novis. App. (1880) 77; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 352.

Duchesnia indica Focke in Engl. & Prantl Nat. Pflanzenfam. 3² (1888) 33.

Luzon (Benguet), *B. S. 31658 Santos, Elmer 5770, Merrill 4373, Phil. Pl. 852, Williams 1442*. On open grassy slopes, altitude 1,300 to 2,400 m. India to Japan southward on the mountains to Java.

Local names: Atabkang (Ig.); dotdating (Ig.); kubkubut (Ig.).

EXCLUDED SPECIES

FRAGARIA NILGERRENSIS Schlecht.; F.-Vill. Novis. App. (1880) 77.

FRAGARIA VESCA Linn.; F.-Vill. l. c.

The form of the strawberry now commonly cultivated in the vicinity of Baguio is probably one of the races of this species. It may become established at higher altitudes in the Mountain Province.

5. ROSA Tournefort

ROSA LUZONIENSIS Merr. in Philip. Journ. Sci. 17 (1920) 259.

Luzon (Benguet), *B. S. 31876 Santos, 4300 Mearns, 8336 McGregor*. In thickets at Pauai, altitude about 2,300 m; allied to the Formosan *Rosa transmorrisonensis* Hayata. Endemic.

Local name: Pauikan (Ig.).

ROSA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 17 (1920) 260.

Rosa multiflora Vidal Rev. Pl. Vasc. Filip. (1886) 123; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 352, non Thunb.

Luzon (Bontoc, Benguet), *Elmer 5794, B. S. 37920 Ramos & Edaña, Merrill Phil. Pl. 882*. In thickets, altitude 1,200 to 1,700 m. Endemic.

Var. **PARVIFOLIA** Merr. op. cit.

Luzon (Ifugao, Lepanto, Benguet). Common in thickets, altitudinal range of the species.

Local names: Kuyaob (Ig.); pigit (Bon.); sabit (Ig.).

A number of horticultural forms of the rose are cultivated in the Archipelago, probably mostly derived forms of *Rosa centiflora* Linn., *R. damascena* Mill., *R. indica* Linn., and *R. semperflorens* Curt. In addition to these *Rosa sinica* Ait. has been reported from the Philippines by F.-Villar, Novis. App. (1880) 77. These horticultural forms of the rose are found in the Archipelago only in cultivation and are nowhere established.

6. **PYGEUM** Gaertner

PYGEUM APOENSE Elm. Leaf. Philip. Bot. 5 (May 30, 1913) 1623; Koehne in Engl. Bot. Jahrb. 52 (1915) 337.

Pygeum apoanum Elm. ex Koehne in Engl. Bot. Jahrb. 51 (Dec. 9, 1913) 205, 217.

Mindanao (Davao, Mt. Apo), *Elmer 11729*. In forests, altitude about 1,000 m; very closely allied to *Pygeum clementis* Merr. Endemic.

Local name: Bakad (Bag.).

PYGEUM CLEMENTIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 227; Elm. Leaf. Philip. Bot. 5 (1913) 1621; Koehne in Engl. Bot. Jahrb. 51 (1913) 205, 218.

Mindanao (Lanao), *Clemens 760, 966, F. B. 25199 Alvarez*. In forests, altitude 600 to 1,000 m. Endemic.

Local name: Dalísai (Lan.).

PYGEUM COCCINEUM (Elm.) Elm. Leaf. Philip. Bot. 5 (1913) 1621; Koehne in Engl. Bot. Jahrb. 52 (1915) 336.

Parinarium coccineum Elm. Leaf. Philip. Bot. 2 (1909) 578.

Negros, Cebu, *Elmer 9787, F. B. 28344 Cenabre & Cruz*. In forests, altitude about 600 m; apparently allied to *Pygeum megaphyllum* Merr. Endemic.

Local name: Alipatsáu (C. Bis.).

PYGEUM DECIPIENS Koehne in Engl. Bot. Jahrb. 51 (1913) 204, 217.

Mindanao (Davao), *Elmer 11095, 11910*. In forests; scarcely distinguishable from *Pygeum preslii* Merr. Endemic.

Local name: Magulamod (Bag.).

PYGEUM ELMERIANUM Koehne in Engl. Bot. Jahrb. 51 (1913) 206, 218.

Sibuyan, *Elmer 12210*. In forests; very close to *Pygeum glandulosum* Merr. Endemic.

PYGEUM EUPHLEBIUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 311.

Mindanao (Lanao), *F. B. 20619 Miranda*. In forests, altitude about 80 m. Endemic.

PYGEUM FRAGRANS Elm. Leaf. Philip. Bot. 2 (1908) 475, 5 (1913) 1622; Koehne in Engl. Bot. Jahrb. 51 (1913) 205, 218.

Luzon (Tayabas, Mt. Banahao), *Elmer 7504*. In forests, altitude about 750 m. Endemic.

The fruiting specimen, *Elmer 7662*, is to be excluded as it represents *Pygeum glandulosum* Merr.

PYGEUM GITINGENSE Elm. Leaf. Philip. Bot. 5 (1913) 1625; Koehne in Engl. Bot. Jahrb. 52 (1915) 335.

Sibuyan, *Elmer 12137*. In forests, altitude about 200 m; scarcely distinguishable from *Pygeum vulgare* (Koehne) Merr. Endemic.

PYGEUM GLANDULOSUM Merr. in Philip. Journ. Sci. 3 (1908) Bot. 226, 5 (1910) Bot. 353; Elm. Leaf. Philip. Bot. 5 (1913) 1621; Koehne in Engl. Bot. Jahrb. 51 (1913) 205, 218.

Pygeum reticulatum Merr. ex Elm. Leaf. Philip. Bot. 5 (1913) 1621, *nomen nudum*.

Luzon (Cagayan to Camarines), Mindoro, Negros. Common in forests at low and medium altitudes, in some regions ascending to 1,500 m. Endemic.

Local names: Aniñgai (Sbl.); bétik (Tag.); dampól (Tag.); gupit (Tag.); kagatóngan (Tag.); kalumala (Tag.); kambál (Tag.); kanumog (Bik.); lago (Tag.); papáin (Bon.); sañgá (Klg.); sangára (Ibn.); tañgá (Ilk.).

PYGEUM MEGAPHYLLUM Merr. ex Elm. Leaf. Philip. Bot. 5 (1913) 1621, Philip. Journ. Sci. 10 (1915) Bot. 312.

Luzon (Laguna, Tayabas, Camarines), Panay, *B. S. 14923 Ramos, 33833, 31121 Ramos & Edaño, Merrill Phil. Pl. 1292, F. B. 24234 Duldulao, 23950 Hirro*. In forests at low and medium altitudes. Endemic.

Local name: Kamantúgan (P. Bis.).

PYGEUM MERRILLIANUM Koehne in Engl. Bot. Jahrb. 51 (1913) 206, 219.

Mindoro, *F. B. 6784, 6744, 4363, 6854 Merritt*. In forests at low and medium altitudes; in the original description the collector is erroneously indicated as *Merrill*. Endemic, although recorded from Amboina with doubt by Koehne op. cit. 52 (1915) 337.

PYGEUM MICROPHYLLUM Elm. Leaf. Philip. Bot. 5 (1913) 1626; Koehne in Engl. Bot. Jahrb. 52 (1915) 335.

Palawan (Mt. Pulgar), *Elmer 13198, F. B. 3869 Curran*. On exposed ridges, altitude about 1,200 m. Endemic.

PYGEUM MONTICOLUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 312.

Luzon (Bataan), *Whitford 1203*. On forested slopes, altitude about 1,100 m. Endemic.

PYGEUM PRESII Merr. in Philip. Journ. Sci. 3 (1908) Bot. 227; Elm. Leaf. Philip. Bot. 5 (1913) 1621; Koehne in Engl. Bot. Jahrb. 51 (1913) 203, 216, 52 (1915) 337 (var. *latifolium*, Koehne).

Germaria latifolia Presl Epim. (1851) 221, Miq. Fl. Ind. Bat. 1¹ (1855) 401, non *Pygeum latifolium* Miq.

Pygeum latifolium Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 122; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 60, non Miq.

Pygeum arboreum F.-Vill. Novis. App. (1880) 76; Vidal Sinopsis Atlas (1883) 25, t. 46, f. B. non Endl.

Pygeum latiphyllum Elm. Leaf. Philip. Bot. 5 (1913) 1622.

Luzon (Sorsogon), Leyte, Bohol, Mindanao, *Cuming* 1815, *B. S.* 15724 *Fénix*, *Wenzel* 142, 162, *F. B.* 22928 *Fajatin*, *Elmer* 11828. Endemic.

Local name: Balia (Bag.); tañgá (Buk.).

PYGEUM PUBESCENS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 359.

Luzon (Benguet, Bontoc, Ilocos Sur, Sorsogon), Samar, Leyte, Negros, *Wenzel* 333, 39, 18, 217, 1579, 331, 1657, 1789, 1674, 221, *B. S.* 24532, 17474 *Ramos*, *F. B.* 25292, 25295, 24005 *Lasquety*, 12427 *Danao*, 24719, 25136 *Leaño*, *Elmer* 6110, 15258 (*P. ovalis* Elm.). In forests at low and medium altitudes, in Benguet ascending to 2,000 m. Endemic.

Local names: Apoakan-amok (S. L. Bis.); magbalanak (S. L. Bis.).

PYGEUM PULGARENSE Elm. Leaf. Philip. Bot. 5 (1913) 1626; Koehne in Engl. Bot. Jahrb. 52 (1915) 336.

Palawan (Mt. Pulgar), *Elmer* 13200. On exposed ridges, altitude about 1,200 m. Endemic.

PYGEUM RAMIFLORUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 447.

Luzon (Bontoc), *Vanoverbergh* 2820, *B. S.* 37913 *Ramos & Edaño*. In forests, altitude 1,400 m. Endemic.

PYGEUM RUBIGINOSUM Elm. Leaf. Philip. Bot. 5 (1913) 1624; Koehne in Engl. Bot. Jahrb. 51 (1913) 205, 218.

Mindanao (Davao, Agusan), *Elmer* 11857, 14067. In forests, altitude about 1,200 m. Endemic.

Local names: Bukad (Bag.); kabung (Mbo.).

PYGEUM VULGARE (Koehne) comb. nov.

Pygeum preslii Merr. var. *vulgare* Koehne in Engl. Bot. Jahrb. 51 (1913) 203, 216.

Pygeum preslii Merr. in Philip. Journ. Sci. 3 (1908) 227 p. p.

Northern Luzon (Cagayan) to Mindanao. Common in forests at low and medium altitudes. This form, typified by *F. B.* 1806 *Borden*, is certainly specifically distinct from *Pygeum preslii* Merr., typified by *Cuming* 1815 from Bohol. Endemic.

Local names: Amongyang (Tag.); amugan (Tag.); apítan (Ibn.); bang-luai (P. Bis.); gupít (Tag.); hunúg (Ibn.); ipus-ípus (C. Bis.); kalishing (Ig.); kambál (Sul.); kanumog (Bik.); komon (Neg.); lago (Tag.); lamaguan (Pamp.); malagmát (Pamp.); paítan (Tag.); pamiliñgan (Ilk.); panikin (Neg.).

EXCLUDED SPECIES

PYGEUM GRIFFITHII Hook. f.; F.-Vill. Novis. App. (1880) 76.

PYGEUM MAINGAYI Hook. f.; F.-Vill. l. c.

PYGEUM MONTANUM Hook. f.; F.-Vill. l. c.

PYGEUM PARVIFLORUM Teyssm. & Binn.; F.-Vill. l. c.

7. PRUNUS Tournefort

PRUNUS JUNGHUHNIANUS Miq. Fl. Ind. Bat. 1¹ (1855) 366; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 180.

Palawan (Mt. Victoria), *B. S.* 731 *Foxworthy*. In rocky stream beds, altitude about 250 m. Java, Sumatra.

DOUBTFUL AND EXCLUDED SPECIES

PRUNUS ARMENIACA Blanco Fl. Filip. ed. 2 (1845) 296, ed. 3, 2 (1878) 185; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 43, Sp. Blancoanae (1918) 163, non Linn.

Prunus triflora F.-Vill. Novis. App. (1880) 76, Roxb.

Blanco's description was based on cultivated specimens observed by him in Manila and in Cagayan Province, Luzon, probably originating in China. The status of the form he ascribed to the Linnean species cannot be determined from his description alone. For it he gives the Spanish name *albaricoques*. It is not *Prunus triflora* Roxb. where it was placed by F.-Villar.

PRUNUS GLANDULOSA Thunb.; Llanos in Mem. Acad. Cienc. Madr. 4 (1858); F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 76, Novis. App. (1880) 76.

There is no description; Llanos probably had a species of *Pygeum*.

PRUNUS PERSICA (Linn.) Stokes.

The peach is occasionally planted at high altitudes in the Mountain Province, Luzon.

8. PARINARIUM Aublet

PARINARIUM BICOLOR Merr. in Philip. Journ. Sci. 10 (1915) Bot. 309.

Mindanao (Surigao), *F. B. 23022 Razon*. On open slopes at low altitudes. Endemic.

PARINARIUM CORYMBOSUM (Blume) Miq. Fl. Ind. Bat. 1¹ (1855) 356; F.-Vill. Novis. App. (1880) 76; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 309, Sp. Blancoanae (1918) 162.

Maranthes corymbosa Blume Bijdr. (1825) 89.

Maranthes multiflora Korth. Verh. Nat. Gesch. Bot. (1839-42) 259, t. 70.

Parinarium griffithianum Benth. in Hook. Niger Fl. (1849) 334; Miq. Fl. Ind. Bat. 1¹ (1855) 356; F.-Vill. Novis. App. (1880) 76; Vidal Sinopsis Atlas (1883) 25, t. 46, f. A; Perk. Frag. Fl. Philip. (1904) 118; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 60.

Grymania salicifolia Presl Epim. (1851) 193.

Parinarium salicifolium Miq. Fl. Ind. Bat. 1¹ (1855) 357; F.-Vill. Novis. App. (1880) 76; Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 121.

Parinarium racemosum Vidal Cat. Pl. Prov. Manila (1880) 29.

Polyalthia pulchrinervia Boerl. Cat. Hort. Bogor. (1899) 20, Ic. Bogor. 1 (1899) 106.

Northern Luzon (Cagayan) to Mindanao and Palawan. Common in forests at low and medium altitudes. India through Malaya to tropical Australia.

Local names: Alamag (Tag.); aníngat (Ilk.); arañgan (Tagb.); bagkañgai (C. Bis.); bakayau (Pang.); bakokoyan (P. Bis.); bagkangai (Mbo.); bárit (Bik., C. Bis.); bingás (Ilk.); bongog (S. L. Bis.); dau (S. L. Bis.); deleybaybai (Tag.); dumaga (Kuy.); kagemkém (Ilk.); kalagkañgan (Bag.); kamulitiñgan (Pamp.); kankañgan (Bag.); kapgañgan (Tag.); karatákat (Ilk.); kuliliñgan (Tag.); lankañgan (Lan.); lañgog (Buk.); lañgug (Buk.); laiúsin (Bik., S. L. Bis.); liúsin (Sbl., Tag., Bik.); lumaluas (Mag.); malapiga (Tag.); malapúyau (Tag.); maluktik (Sul.); mata-matá (S. L. Bis.); ogat (Bag.); sabongkáag (Ilk., Ting.); salipu-

ngan (Neg.); salútui (Neg.); saránggan (S. L. Bis.); sigaadán (Mag.); tádiang-manók (Ting., Tag.); takdánggan (Tag.); tapgas (P. Bis.); uas-uasa (Klg.).

PARINARIUM COSTATUM Blume ex Miq. Fl. Ind. Bat. 1¹ (1855) 354; King in Journ. As. Soc. Beng. 66² (1897) 277.

Samar, Mindanao (Surigao, Davao), *F. B. 12871 Rosenbluth, 25948 Cortes, 25075 Ponce, 26600 Ceballos*. In forests at low altitudes. Malay Peninsula to Sumatra, Java, and Borneo.

Local names: Barit (S. L. Bis.); moises (S. L. Bis.).

PARINARIUM GLABERRIMUM Hassk. in Tijdschr. Nat. Gesch. 10 (1843) 147, *nomen nudum*, Cat. Hort. Bogor. (1844) 269, *nomen nudum*, Flora 27 (1844) 583; Merr. Interpret. Herb. Amb. (1917) 247.

Parinarium scabrum Hassk. l. cc.; Miq. Fl. Ind. Bat. 1¹ (1855) 354; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 22.

Parinarium laurinum A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 490, t. 55; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 310.

Parinarium mindanaense Perk. Frag. Fl. Philip. (1904) 119.

Parinarium racemosum Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 19.

Parinarium curranii Merr. in Philip. Journ. Sci. 4 (1909) Bot. 264.

Luzon (Camarines, Albay), Masbate, Palawan, Mindanao. In forests at low and medium altitudes. Java and Borneo across Malaya to Polynesia.

Local names: Botabon (Tagb.); botgo (Bik.); butabul (Tagb.); gotabon (Tagb.); pantog-usá (Kuy.); pinai (P. Bis.); tabong (Bag.); tabon-tabon (C. Bis., Bik., Mbo.); tabun-tabun (C. Bis., Bag., Bik.); tambon-tambon (P. Bis.).

PARINARIAM VILLAMILII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 308.

Luzon (Camarines), Mindanao (Zamboanga), *F. B. 21863 Villamil, 24544 Aguilar*. In forests at low altitudes. Endemic.

9. ANGELESIA Korthals

ANGELESIA SPLENDENS Korth. in Nederl. Kruick. Arch. 3 (1854) 384; Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 236; Boerl. & Koord. in Ic. Bogor. 1 (1901) t. 96; Merr. in Philip. Journ. Sci. 10 (1915) 307; Elm. Leaf. Philip. Bot. 5 (1913) 1638, in nota.

Licania angelesia Blume Mél. Bot. (1855) No. 2, Flora 41 (1858) 256.

Trichocarya splendens Miq. Fl. Ind. Bat. 1¹ (1855) 358; F.-Vill. Novis. App. (1880) 76.

Chrysobalanus splendens Miq. l. c. in syn.

Parinarium nitidum Hook. f. Fl. Brit. Ind. 2 (1878) 310; King in Journ. As. Soc. Beng. 66² (1897) 284.

Samar, Panay, Mindanao (Surigao), Busuanga, Palawan, Balabac, *Merrill Phil. Pl. 1224, 1696, B. S. 17431 Ramos, 34519 Ramos & Pascasio, 35458, 35524, 35520, 35519 Martelino & Edaño*. In dry thickets and forests at low altitudes. Malay Peninsula, Sumatra, Borneo.

Local names: Balik (P. Bis.); dagínggan (S. L. Bis.); dagingdínigan (S. L. Bis.).

EXCLUDED GENERA

COUEPIA GUIANENSIS Aubl.; Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 106.

GRANGERIA BORBONICA Lam.; Vidal Cat. Pl. Prov. Manila (1880) 29.

PARASTEMON UROPHYLLUS A. DC.; F.-Vill. Novis. App. (1880) 76.

CHRYSOBALANUS ICACO Linn.

A recent introduction from tropical America, cultivated at Lanao and at Los Baños.

PYRUS MALUS Linn.

The apple is occasionally cultivated at high altitudes in the Mountain Province, Luzon.

CONNARACEAE

1. *CONNARUS* Linnaeus

CONNARUS CAUDATUS Merr. in Philip. Journ. Sci. 17 (1920) 261.

Bucas Grande, *B. S. 35059 Ramos & Pascasio*. In dry forests at low altitudes. Endemic.

CONNARUS BALSAHANENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1764.

Palawan, *Elmer 13083, Merrill 9184, 9457*. In forests and thickets at low altitudes. Endemic.

CONNARUS BRACTEATUS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 120.

Luzon (Cagayan), *F. B. 11308 Klemme*. In dense forests at low altitudes. Endemic.

CONNARUS CASTANEUS Merr. in Philip. Journ. Sci. 14 (1919) 403.

Luzon (Camarines), *B. S. 33600 Ramos & Edaña*. In forests at low altitudes. Endemic.

CONNARUS CULIONENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 120.

Culion, Palawan, *Merrill 450, 9219, 9220*. In dry thickets at low altitudes. Endemic.

CONNARUS ERIANTHUS Elm. Leaf. Philip. Bot. 5 (1913) 1762.

Palawan, *Elmer 12877*. In forests at low altitudes. Endemic.

CONNARUS HALLIERI Merr. in Philip. Journ. Sci. 4 (1909) Bot. 122.

Connarus carnosus Elm. Leaf. Philip. Bot. 4 (1912) 1508.

Connarus fragrans Elm. op. cit. 1507.

Luzon (Tayabas, Laguna, Camarines, Sorsogon), Sibuyan, Leyte, Samar, Basilan, *Hallier, Elmer 7269, 12305, 12069, 13518 (C. sorsogonensis Elm.), B. S. 19553, 20524 Ramos, Wenzel 1770, Cuming 1465*. In forests at low and medium altitudes. Endemic.

Local names: Bago-bago (P. Bis.); oñgali (S. L. Bis.).

CONNARUS MINDANAENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 122; C. B. Rob. op. cit. 6 (1911) Bot. 205.

Leyte, Samar, Mindanao, *Clemens 754, Wenzel 1727, 1476, B. S. 24540 Ramos, F. B. 23911 Ponce, 28216 Elumir*. In forests at low and medium altitudes. Endemic.

Local names: Kauang (Mbo.); sapinib (C. Bis.); uñgali (S. L. Bis.); uul (C. Bis.).

CONNARUS NEUROCALYX Planch. in *Linnaea* 23 (1850) 428; Walp. Ann. 2 (1850-51) 300; Miq. Fl. Ind. Bat. 1² (1858-59) 665; F.-Vill. Novis. App. (1880) 56; Vidal Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 103, Synopsis Atlas (1883) 23, t. 39, f. E; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 61, 4 (1909) Bot. 121, Fl. Manila (1912) 220.

Connarus obtusifolius Planch. in *Linnaea* 23 (1850) 428; Walp. Ann. 2 (1850-51) 300; Miq. Fl. Ind. Bat. 1² (1858-59) 665; F.-Vill. Novis. App. (1880) 57; Vidal Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 103; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 121.

Northern Luzon (Isabela) southward to Panay and Negros. Common in thickets and forests at low and medium altitudes. Endemic.

Local names: Kamot (Pamp.); sandalino (Tag.).

CONNARUS PALAWANENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1763.

Palawan, *Elmer* 12771. In forests at low altitudes. A species of which the fruits are unknown. Endemic.

CONNARUS STELLATUS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 119.

Balabac, *B. S.* 520 *Mangubat*. In forests at low altitudes. Endemic.

CONNARUS SUBFOVEOLATUS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 15.

Luzon (Apayao), *B. S.* 28240 *Fénix*. In damp forests at medium altitudes. Endemic.

CONNARUS SUBINAEQUIFOLIUS Elm. Leaf. Philip. Bot. 1 (1908) 297; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 124.

Luzon (Benguet, Laguna, Tayabas), *Elmer* 9341, 6208, *Baker* 3678, *B. S.* 10969 *Ramos*. In forests at low and medium altitudes.

CONNARUS TRIFOLIATUS (Turcz.) Rolfe in Journ. Bot. 23 (1885) 212 (*trifoliolatus*); Vidal Rev. Pl. Vasc. Filip. (1886) 103; Ceron Cat. Pl. Herb. Manila (1892) 59; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 119.

Anisostemon trifoliatus Turcz. in Bull. Soc. Nat. Mosc. 20¹ (1847) 152; Walp. Ann. 1 (1848) 199.

Connarus polyanthus Planch. in *Linnaea* 23 (1850) 428; Walp. Ann. 2 (1850-51) 300; Miq. Fl. Ind. Bat. 1² (1858-59) 665; F.-Vill. Novis. App. (1880) 56; Vidal Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 103.

Connarus rolfei Vidal Phan. Cuming. Philip. (1885) 106.

Luzon (Cagayan, Tayabas, Albay, Sorsogon), Biliran, Leyte, Negros, Mindanao, Basilan. In forests at low and medium altitudes. Endemic.

CONNARUS WHITFORDII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 123.

Mindanao (Zamboanga), *F. B.* 9185 *Whitford & Hutchinson*. In forests at low altitudes. Endemic.

EXCLUDED SPECIES

CONNARUS FERRUGINEUS Jack; F.-Vill. Novis. App. (1880) 57.

CONNARUS PANICULATUS Roxb.; F.-Vill. l. c.

2. AGELAEA Solander

AGELAEA EVERETTII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 127; C. B. Rob. op. cit. 6 (1911) Bot. 205.

Northern Luzon (Cagayan) to Mindanao and Palawan incl. *Elmer* 16822 as *A. platyphylla* Elm. In forests at low and medium altitudes. Endemic, although scarcely distinct from *A. borneensis* (Hook. f.) Merr. (*A. vestita* Hook. f.) of the Malay Peninsula and Borneo.

Local names: Balagun (P. Bis.); kamágsa (Tag.); kamáksa (Tag.); ngáluk (Ibn.); ongali (P. Bis.); ungali (P. Bis.).

AGELAEA TRINERVIS (Llanos) Merr. Sp. Blancoanae (1918) 164.

Castañola trinervis Llanos in Mem. Acad. Cienc. Madr. III 2 (1859) 505; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 103.

Agelaea wallichii Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 19, Philip. Journ. Sci. 1 (1906) Suppl. 61, 4 (1909) Bot. 126, non Hook. f.

Connarus monocarpus F.-Vill. Novis. App. (1880) 57, non Linn.

Agelaea vestita Vidal Sinopsis Atlas (1883) 23, t. 39, f. D, non Hook. f.

Luzon (Tayabas to Sorsogon) southward to Mindanao. In forests at low and medium altitudes. Endemic.

Local names: Dagtung (Mbo.); tayabak (Tag.); ulali (Tag.).

3. ROUREA Aublet

ROUREA ERECTA (Blanco) Merr. in Philip. Journ. Sci. 4 (1909) Bot. 125, Fl. Manila (1912) 220.

Cnestis erecta Blanco Fl. Filip. (1837) 387.

Cnestis glabra Blanco Fl. Filip. (1837) 387, ed. 2 (1845) 271, ed. 3, 2 (1878) 138, t. 140, non Linn.

Omphalobium pictum Blanco op. cit. ed. 2 (1845) 271, ed. 3, 2 (1878) 139.

Rourea multiflora Planch. in Linnaea 23 (1850) 418; Walp. Ann. 2 (1851) 297; Miq. Fl. Ind. Bat. 1² (1858-59) 658; F.-Vill. Novis. App. (1880) 56; Vidal Sinopsis Atlas (1883) 23, t. 39, f. A, Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 102; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 61.

Omphalobium obliquum Presl Epim. (1851) 207.

Connarus obliquus Walp. Ann. 3 (1852-53) 884; Vidal Phan. Cuming. Philip. (1885) 106.

Santaloides erectum Schellenb. Beitr. Anat. Syst. Connar (1910) 51, Fedde Repert. 10 (1911) 247; Merr. Sp. Blancoanae (1918) 163.

Northern to Central Luzon (Cagayan to Laguna), Lubang, Mindoro, Cuyo, Leyte, Panay, Bantayan. Common in dry thickets and second-growth forests at low and medium altitudes. Endemic, although *R. rubella* Pierre of Indo-China is scarcely distinguishable.

Local names: Gikos-gikos (Tag.); guraikan (Tag.); hanmababau (Bis., Tag.); kamagsa (Tag.); kamagsa-tagilis (Tag.); kamumin (Tag.); magtabig (Bis., Pamp.); palo santo (Sp.); paragauúk (Ibn.).

ROUREA IMBRICATA Elm. Leaf. Philip. Bot. 7 (1915) 2597.

Mindanao (Agusan), *Elmer 14309*. In forests, altitude about 950 m; very closely allied to *Rourea volubilis* Merr. and perhaps not specifically distinct. Endemic.

Local name: Dakolai (Mbo.).

ROUREA LUZONIENSIS Merr. in Philip. Journ. Sci. 14 (1919) 404.

Luzon (Camarines), *B. S. 33534 Ramos & Edaño*. In thickets at low altitudes. Endemic.

ROUREA UNIFOLIOLATA Merr. in Philip. Journ. Sci. 8 (1913) Bot. 372.

Leyte, *Wenzel 36*. In forests at low altitudes. This may ultimately prove to be merely a form of *Rourea volubilis* Merr. with all or most of the leaves unifoliate; it is certainly very closely allied to that species. Endemic.

ROUREA VOLUBILIS (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 36, Philip. Journ. Sci. 1 (1906) Suppl. 61, 4 (1909) Bot. 125. *Cnestis volubilis* Blanco Fl. Filip. (1837) 385.

Cnestis trifolia Blanco op. cit. ed. 2 (1845) 270, ed. 3, 2 (1878) 136, non Lam.

Rourea heterophylla Planch. in Linnaea 23 (1850) 419; Walp. Ann. 2 (1851) 297; Miq. Fl. Ind. Bat. 1² (1858-59) 658; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 375; F.-Vill. Novis. App. (1880) 56; Vidal Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 103.

Santaloides volubile Schellenb. Beitr. Anat. Syst. Connar. (1910) 51, Fedde Repert. 10 (1912) 247; Merr. Sp. Blancoanae (1918) 164.

Rourea microcarpa Elm. Leaf. Philip. Bot. 7 (1915) 2599.

Rourea subvolubilis Elm. op. cit. 2600.

Northern Luzon (Cagayan) to Mindanao and Palawan. In thickets and forests at low and medium altitudes; common and variable. Hainan.

Local names: Baraláng (Ibn.); bitog (Ig.); gikos-gikos (Tag.); hanam-babau (Bis.); kalayan (Bag.); kamagsa (Tag.); kamagsa-takilis (Tag.); mabindato (Bis.); palo santo (Sp.); tioa (Bag.); ungalina (Bis.).

EXCLUDED SPECIES

ROUREA COMMUTA Planch.; F.-Vill. Novis. App. (1880) 56.

ROUREA RUGOSA Planch.; F.-Vill. l. c.

ROUREA SANTALOIDES W. & A.; F.-Vill. l. c.

4. CNESTIS Jussieu

CNESTIS PALALA (Lour.) Merr. in Journ. Straits Branch Roy. As. Soc. 85 (1922) 201.

Thysanus palala Lour. Fl. Cochinch. (1790) 284, excl. syn. Rumph.

Thysanus cochinchinensis DC. Prodr. 2 (1825) 91.

Cnestis diffusa Blanco Fl. Filip. (1837) 386; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 127, Sp. Blancoanae (1918) 164.

Cnestis corniculata Blanco Fl. Filip. (1837) 386, ed. 2 (1845) 270, ed. 3, 2 (1878) 138, non Lam.

Cnestis polyphylla Blanco op. cit. ed. 2 (1845) 270, ed. 3, 2 (1878) 137, non Lam.

Cnestis ramiflora Griff. Not. 4 (1854) 432; F.-Vill. Novis. App. (1880) 57; Vidal Sinopsis Atlas (1883) 23, t. 39, f. C, Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 103; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 61.

Luzon (Ilocos Norte to Laguna), Lubang, Burias, Cebu. In thickets at low and medium altitudes. Burma, Siam, Indo-China, Malay Peninsula, Sumatra, Borneo.

Local names: Kalakalamyásan (Tag.); palo santo (Sp.); pias-piásan (Tag.); salsaladái (Ilk.); torotagotum (P. Bis.).

5. ELLIPANTHUS Hooker f.

ELLIPANTHUS LONGIFOLIUS Merr. in Philip. Journ. Sci. 17 (1920) 262.

Dinagat, *B. S. 35180 Ramos & Pascasio*. In forests along streams at low altitudes. Endemic.

ELLIPANTHUS LUZONIENSIS Vidal Rev. Pl. Vasc. Filip. (1886) 104; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 61, 4 (1909) Bot. 124.

Ellipanthus helferi Vidal Sinopsis Atlas (1883) 23, t. 39, f. B, non Hook. f.

Ellipanthus vidalii Elm. Leaf. Philip. Bot. 7 (1915) 2596.

Northern and central Luzon (Cagayan to Bulacan and Bataan) southward to Mindanao. Common in forests at low and medium altitudes. Endemic.

Local names: Alomañgói (Tag.); atarúkan (Tag.); saling-uák (P. Bis.).

ELLIPANTHUS MINDANAENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 124, Journ. Str. Branch Roy. As. Soc. 76 (1917) 84.

Mindanao (Zamboanga), *F. B. 9276 Whitford & Hutchinson, B. S. 36811, 36875, 36944, 37033 Ramos & Edaña*. In forests at low altitudes. Borneo.

ELLIPANTHUS URDANETENSIS (Elm.) comb. nov.

Connarus urdanetensis Elm. Leaf. Philip. Bot. 7 (1915) 2594.

Ellipanthus buribidensis Elm. op. cit. 2596.

Luzon (Tayabas, Camarines, Sorsogon), Mindanao (Agusan, Davao), *Elmer 11941, 14043, 15556, B. S. 20711 Eseritor, 13369, 22105 Ramos, 25403 Yates*. In forests at low and medium altitudes, ascending to 1,000 m. Endemic.

Local names: Dañgalis (Bag.); pañgalámag (Mbo.).

EXCLUDED SPECIES

ELLIPANTHUS CALOPHYLLUS Kurz; F.-Vill. Novis. App. (1883) 351.

ELLIPANTHUS TOMENTOSUS Kurz; F.-Vill. l. c.

LEGUMINOSAE

1. SERIANTHES Benth

SERIANTHES GRANDIFLORA (Wall.) Benth. in Hook. Lond. Journ. Bot. 3 (1844) 225, Trans. Linn. Soc. 30 (1875) 599; Miq. Fl. Ind. Bat. 1¹ (1855) 40; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 301; F.-Vill. Novis. App. (1880) 75; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 454; Vidal Sinopsis Atlas (1883) 24, t. 44, f. F., Phan. Cuming.

Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 121; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 22; Philip. Journ. Sci. 5 (1910) Bot. 15.

Inga grandiflora Wall. Cat. (1832) No. 5285, *nomen nudum*.

Palawan, Panay, Negros, Mindanao, *Merrill Phil. Pl. 1166, F. B. 3800 Curran, 23939 Cortes & Knapp, 22829 Ponce, 5616 Everett, Ahern 447*. In beach forests, Malay Peninsula to New Guinea and the Aru Islands.

Local names: Honok (C. Bis.); kásai (P. Bis.); maganhop-sa-baibái (P. Bis.); nap (Sul.).

2. SAMANEA (Bentham) Merrill

SAMANEA SAMAN (Jacq.) Merr. in Journ. Wash. Acad. Sci. 6 (1916) 47.

Mimosa saman Jacq. Fragm. (1800) 15, t. 9.

Inga saman Willd. Sp. Pl. 4 (1806) 1024.

Pithecolobium saman Benth. in Hook. Lond. Journ. Bot. 3 (1844) 101; F.-Vill. Novis. App. (1880) 76; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 309; Perk. Frag. Fl. Philip. (1904) 5; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 31.

Enterolobium saman Prain ex King in Journ. As. Soc. Beng. 66¹ (1897) 352; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 15, Fl. Manila (1912) 225.

Introduced from tropical America about 1860, now widely planted as a shade tree, in places spontaneous. Pantropic in cultivation; the rain tree.

Local name: Acacia (Sp.).

3. PITHECOLOBIUM Martius

PITHECOLOBIUM ANGULATUM (Grah.) Benth. in Hook. Lond. Journ. Bot. 3 (1844) 208, Trans. Linn. Soc. 30 (1875) 580; F.-Vill. Novis. App. (1880) 76; Ceron Cat. Pl. Herb. Manila (1892) 72; Perk. Frag. Fl. Philip. (1904) 4; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 19.

Inga angulata Grah. in Wall. Cat. (1832) No. 5271, *nomen nudum*.

Northern Luzon (Cagayan) to Palawan, Panay, and Negros. In thickets and secondary forests at low and medium altitudes.

The Philippine form is the var. *intermedium* Prain in Journ. As. Soc. Beng. 66² (1897) 275. *Pithecolobium clypearia* (Jack) Benth., although currently retained as a distinct species, is not clearly distinguishable, and the latter name should perhaps be adopted as Jack's name is older than Graham's. India, through Malaya to the Moluccas.

Local names: Bagalūṅgá, bagaluṅgá (P. Bis.); bakan (Bik.); barokmók (Mang.); bunsikág (Tagb.); maganhop-sa-tayon (P. Bis.); potkipot (P. Bis.).

PITHECOLOBIUM APOENSE Elm. Leaf. Philip. Bot. 2 (1910) 694.

Mindanao (Davao), *Elmer 11710*. In forests, altitude about 1,200 m. Endemic.

Local name: Magatkarot (Mbo.).

PITHECOLOBIUM CAULOSTACHYUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 10.

Samar, *Merrill Phil. Pl. 1637*. In forests at low altitudes. Endemic.

PITHECOLOBIUM DULCE (Roxb.) Benth. in Hook. Lond. Journ. Bot. 3 (1844) 199, Trans. Linn. Soc. 30 (1875) 572; Miq. Fl. Ind. Bat. 1^a (1855) 40; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 485; F.-Vill. Novis. App. (1880) 75; Vidal Rev. Pl. Vasc. Filip. (1886) 121; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 82, 5 (1910) Bot. 16, Fl. Manila (1912) 225, Sp. Blancoanae (1918) 165.

Mimosa dulcis Roxb. Pl. Coromandel 1 (1795) 67, t. 99.

Inga dulcis Willd. Sp. Pl. 4² (1805) 1005; DC. Prodr. 2 (1825) 436.

Inga camatchili Perr. in Mém. Soc. Linn. Paris 3 (1824) 122; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 305.

Mimosa unguis-cati Blanco Fl. Filip. (1837) 731, non Linn.

Inga lanceolata Blanco op. cit. ed. 2 (1845) 370, ed. 3, 2 (1879) t. 237, non HBK.

Throughout the Philippines at low and medium altitudes, in many regions thoroughly naturalized. Introduced from Mexico; now pantropic.

Local names: Damórtis (Ilk.); chamúltis (Ig.); damúlkis (Bon.); kamachíli (Tag., Bik.); kamachilis (Tag.); kamanchile (Tag.); kamanchilis (P. Bis., Mag.); kamansile (Tag.); kamantílis (Pang.); kamarsílis (Tag.); kamatséle (Tag.); kamonsiles (Tag.); karamansili (Ib.); komonsíli (P. Bis.); komóntos (Ting.); kamúnsil (P. Bis.); komóntres (Ting.), all corruptions or modifications of the Aztec *kwamochitl*.

PITHECOLOBIUM ELLIPTICUM (Blume) Hassk. Retzia 1 (1855) 225; Prain ex King in Journ. As. Soc. Beng. 66² (1897) 270, 516; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 104; Merr. op. cit. 5 (1910) Bot. 19.

Inga elliptica Blume Cat. Gew. Buitenz. (1823) 88; Walp. Repert. 1 (1842) 930.

Pithecolobium fasciculatum Benth. in Hook. Lond. Journ. Bot. 3 (1844) 208.

Palawan, Panay, Negros, Mindanao, Merrill Phil. Pl. 1319, B. S. 31142 Ramos & Edaño, Williams 2094, F. B. 24310 Tecson. In forests along streams, in old clearings, etc., at low and medium altitudes. Malay Peninsula and Archipelago.

Local names: Bugas (P. Bis.); salangkógi (C. Bis.); tabid-tabid (Sul.).

PITHECOLOBIUM MINDANAENSE Merr. in Philip. Journ. Sci. 5 (1910) Bot. 18.

Mindanao (Lanao, Davao, Misamis, Zamboanga), Basilan, Clemens 277, F. B. 17947 Miranda, 25918 Alviar, B. S. 36688 Ramos & Edaño, Weber 1437. In thickets and secondary forests at low and medium altitudes. Endemic.

Local names: Kulikul (Sul.); lalatan (Sub.); tomanag (Bag.).

PITHECOLOBIUM MULTIFLORUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 11.

Luzon (Benguet, Tayabas), Merrill Phil. Pl. 1779 (as *P. platycarpum* Merr.), B. S. 28995 Ramos & Edaño. In forested ravines up to an altitude of 1,200 m. Endemic.

Local name: Anagip (Tag.).

PITHECOLOBIUM PAUCIFLORUM Benth. in Hook. Lond. Journ. Bot. 3 (1844) 212; Miq. Fl. Ind. Bat. 1¹ (1855) 40; F.-Vill. Novis. App. (1880) 75; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 229, 5 (1910) Bot. 18.

Luzon (Albay), Samar, Leyte, Camiguin de Misamis, Bohol, Mindanao (Surigao), *Cuming 1854, F. B. 10566 Curran, 12893 Rosenbluth, Whitford 11639, Wenzel 43, 1194, 1527, B. S. 14465 Ramos*. In primary forests at low and medium altitudes. Endemic.

Local names: Malatágum (Bik.); panauisanung (C. Bis.).

PITHECOLOBIUM (?) PLATYCARPUM Merr. in Philip. Journ. Sci. 5 (1910) Bot. 17.

Luzon (Benguet), *Elmer 6439*. In damp thickets in ravines, altitude about 400 m. Endemic.

PITHECOLOBIUM PRAINIANUM Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 61, 2 (1907) Bot. 276, 5 (1910) Bot. 20.

Pithecolobium parvifolium Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 19, non Benth.

Pithecolobium montanum Benth. var. *microphyllum* Benth. in Trans. Linn. Soc. 30 (1875) 581; Vidal Phan. Cuming. Philip. (1885) 111, Vidal Rev. Pl. Vasc. Filip. (1886) 121.

Pithecolobium montanum Vidal Sinopsis Atlas (1883) 25, t. 45, f. A, non Benth.

Luzon (Bontoc to Sorsogon), Mindoro, Leyte, Camiguin de Misamis. On exposed slopes and ridges, altitude 900 to 2,000 m. Borneo, Java.

Local name: Kamanigum (Ig.).

PITHECOLOBIUM SCUTIFERUM (Blanco) Benth. in Hook. Lond. Journ. Bot. 3 (1844) 211; Miq. Ind. Bat. 1¹ (1855) 39; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 228, 5 (1910) Bot. 17, Sp. Blancoanae (1918) 165.

Mimosa scutifera Blanco Fl. Filip. (1837) 735, ed. 2 (1845) 507, ed. 3, 3 (1879) 138, t. 438.

Pithecolobium lobatum F.-Vill. Novis. App. (1880) 75; Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 120; Perk. Frag. Fl. Philip. (1904) 4; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 23, Philip. Journ. Sci. 1 (1906) Suppl. 62, non Benth.

Northern Luzon (Cagayan) to Mindanao (Agusan). In forests at low and medium altitudes, widely distributed and usually common. Endemic.

Local names: Alobáhai (Tag.); anagáp (Tag.); anagóp (S. L. Bis., Bik.); anagép (Bik.); anagíb (Tag.); anagíp (Tag.); bag (Tag.); baluk-báluk (P. Bis.); bonsilak (P. Bis.); binakálan (Tag.); bunsilak (P. Bis.); kulikul (Bis.); mamaibut (Sub.); tabog (Mbo.).

PITHECOLOBIUM SESSILIFLORUM Merr. in Philip. Journ. Sci. 17 (1920) 262.

Mindanao (Surigao), *B. S. 34675 Ramos & Pascasio*. Along streams at low altitudes. Endemic.

PITHECOLOBIUM SUBACUTUM Benth. in Hook. Lond. Journ. Bot. 3 (1844) 210, Trans. Linn. Soc. 30 (1875) 578; Miq. Fl. Ind. Bat. 1¹ (1855) 37; F.-Vill. Novis. App. (1880) 76; Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 121; Perk. Frag.

Fl. Philip. (1904) 5; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 19, 353, Sp. Blancoanae (1918) 165.

Mimosa scutifera Blanco [var. *casai*] Blanco Fl. Filip. (1837) 736, ed. 2 (1845) 508, ed. 3, 3 (1879) 137, t. 447.

Pithecolobium montanum F.-Vill. Novis. App. (1880) 76; Perk. Frag. Fl. Philip. (1904) 5; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 61, 3 (1908) Bot. 305, 408, non ? Benth.

Batan Islands and northern Luzon to Palawan and Mindanao. In forests at low and medium altitudes, ascending to 1,350 m; perhaps not distinct from the Malayan *P. montanum* Benth. Celebes.

Local names: Alobáhai (Tag.); apalit (Sbl.); asam-asam (Sul.); ayamgílan (Sbl.); Hopang (Ig.); inep (Tag.); maradamórtis (Pang.); maratéka (Ilk.); narangdauél (Ibn.); pangmarunggaién (Ilk.); saplít (Ibn.); tagomtágom (S. L. Bis.); tagurári (Pang.); tikeu (Tag.); tikues (Tag.); tékiu (Tag.); tugayóng (Ibn.); uníp (Tag.).

DOUBTFUL AND EXCLUDED SPECIES

PITHECOLOBIUM BIGEMINUM Mart.; F.-Vill. Novis. App. (1880) 75; Stapf in Trans. Linn. Soc. Bot. 4 (1894) 144.

PITHECOLOBIUM CLYPEARIA Benth.; F.-Vill. Novis. App. (1880) 76, Usteri Beitr. Ken. Philip. Veg. (1905) 117.

Usteri's specimen will probably prove to be *Pithecolobium angulatum* Benth. or *P. subacutum* Benth.

4. WALLACEODENDRON Koorders

WALLACEODENDRON CELEBICUM Koord. in Meded. Lands Plantent. 19 (1898) 446, 631; Gilg. in Engl. & Prantl Nat. Pflanzenfam. Nachtr. 2 (1900) 30; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 23, Philip. Journ. Sci. 3 (1908) Bot. 409, 5 (1910) Bot. 26; Perk. Frag. Fl. Philip. (1904) 5.

Pithecolobium williamsii Elm. Leaf. Philip. Bot. 1 (1907) 223.

Babuyan Islands and northern Luzon (Cagayan) to Samar, Negros, and Cebu. In forests at low and medium altitudes. A monotypic genus otherwise known only from Celebes.

Local names: Banúyo (Tag., Bik., S. L. Bis., P. Bis.); bulilísing (Ilk.); dauél (Ibn.); dauér (Ibn.); lupígi' (Ibn., Neg.); magbon (C. Bis.); malátágom (Tag.); melmel (Neg.); nárang-dauél (Ilk.); nipat-nípat (C. Bis.); supénggan (Ibn.); salonggígi (Bik.).

5. ALBIZZIA Durazzini

ALBIZZIA ACLE (Blanco) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 25, Fl. Manila (1912) 226, Sp. Blancoanae (1918) 165.

Mimosa acle Blanco Fl. Filip. (1837) 738, ed. 2 (1845) 509, ed. 3, 3 (1879) 140.

Pithecolobium acle Vidal Rev. Pl. Vasc. Filip. (1886) 121; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 23, Philip. Journ. Sci. 1 (1906) Suppl. 61; Perk. Frag. Fl. Philip. (1904) 4.

Xylia dolabriformis Vidal Cat. Pl. Herb. Manila (1880) 28; F.-Vill. Novis. App. (1880) 73, non Benth.

Northern Luzon (Ilocos Sur) southward to Palawan and Negros. In forests at low and medium altitudes. Endemic.

Local names: Ákle (Sbl., Tag., Pamp., Tagb., P. Bis.); banúyo (P. Bis.); kitakita (Ilk., Pang.); lañgin (P. Bis.); lañgip (Bis.); mabunga (Tag.); sauriri (Tagb.); solungkigi (Tagb.); tabalañgi (Bis.); tili (Sbl.); tilis (Sbl.).

ALBIZZIA CHINENSIS (Osbeck) Merr. in Am. Journ. Bot. 3 (1916) 575.

Mimosa chinensis Osbeck Dagbok Ostind. Resa (1757) 233.

Mimosa marginata Lam. Encycl. 1 (1783) 12.

Mimosa stipulata Roxb. Hort. Beng. (1814) 40, *nomen nudum*.

Mimosa stipulacea Roxb. Fl. Ind. ed. 2, 2 (1832) 549.

Acacia marginata Ham. in Wall. Cat. (1832) No. 5243, *nomen nudum*.

Albizzia stipulata Boiv. in Encycl. XIX Siècle 2 (1838) 33; Benth. in Hook. Lond. Journ. Bot. 3 (1844) 92, Trans. Linn. Soc. 30 (1875) 568; F.-Vill. Novis. App. (1880) 75.

Albizzia marginata Merr. in Philip. Journ. Sci. 5 (1910) Bot. 23.

Albizzia julibrissin Perk. Frag. Fl. Philip. (1904) 5, non Duraz.

Luzon (Abra, Ilocos Sur, Nueva Vizcaya, Nueva Ecija, Rizal, Bataan, Laguna). In thickets and open forests at low and medium altitudes; apparently very closely allied to *Albizzia julibrissin* Duraz. India to southern China southward to Java.

Local names: Hinagit (If.); kantiñgen (Ilk.); kúpang-babáe (Tag.); kúpang-bundók (Tag.); malagahanip (Tag.); malakaráyom (Tag.); mala-tígi (Tag.); ónik (Tag.); ónog (Ilk.); úník (Tag.); únip (Tag.).

ALBIZZIA LEBBECK (Linn.) Benth. in Hook. Lond. Journ. Bot. 3 (1844)

87, Trans. Linn. Soc. 30 (1875) 562 (*lebbek*); F.-Vill. Novis. App.

(1880) 75; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 316;

Vidal Sinopsis Atlas (1883) 25, t. 45, f. E, Rev. Pl. Vasc. Filip.

(1886) 120; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 23, Philip. Journ. Sci. 5 (1910) Bot. 23, Fl. Manila (1912) 226.

Mimosa lebeck Linn. Sp. Pl. (1753) 516.

Luzon (Ilocos Sur, Amburayan, Union, Bataan, Manila, in all places planted only), Palawan, Busuanga (probably native). A native of tropical Asia and Africa, now introduced in most tropical countries.

Local names: Acacia (Sp.); aninaplá (Tag.); lánḡil (Tag.).

ALBIZZIA LEBBEKOIDES (DC.) Benth. in Hook. Lond. Journ. Bot. 3

(1844) 89, Trans. Linn. Soc. 30 (1875) 568; Merr. in Philip. Journ.

Sci. 1 (1906) Suppl. 62, 5 (1910) Bot. 23, Sp. Blancoanao (1918) 166.

Acacia lebbekoides DC. Prodr. 2 (1825) 467.

Mimosa carisquis Blanco Fl. Filip. (1837) 734, ed. 2 (1845) 507, ed. 3, 3 (1879) 137.

Albizzia julibrissin F.-Vill. Novis. App. (1880) 75, non Duraz.

Northern Luzon to Minadanao. In thickets and forests at low and medium altitudes. The Philippine material agrees closely with the type of the species, from Timor, an excellent photograph of the type sheet having kindly been prepared for me by C. de Candolle. Burma and Siam to Java and Timor.

Local names: Halugánit (Tag.); kariskís (Ilk.); maganhóp-sa-búkid (P. Bis.); malagánit (Tag.); malaghánip (Tag.); malagháni' (Tag.); malasampálok (Pamp., Tag.).

ALBIZZIA MAGALLANENSIS Elm. Leaf. Philip. Bot. 2 (1910) 693.

Albizzia myriantha Merr. in Philip. Journ. Sci. 10 (1915) Bot. 8.

Luzon (Camarines), Sibuyan, Palawan, *Elmer 12089, Merrill 9259, F. B. 21735 Peñas*. In forests at low altitudes; fruiting material will probably show this to be identical with *Albizzia pedicellata* Baker of the Malay Peninsula. Endemic.

ALBIZZIA MEGALADENIA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 16.

Luzon (Tayabas, east coast), *B. S. 29023 Ramos & Edaño*. In damp forests at low altitudes. Endemic.

ALBIZZIA PROCERA (Roxb.) Benth. in Hook. Lond. Journ. Bot. 3 (1844)

89, Trans. Linn. Soc. 30 (1875) 564; Miq. Fl. Ind. Bat. 1¹ (1855)

21; Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip.

(1886) 120; F.-Vill. Novis. App. (1880) 75; Merr. in Philip. Forestry

Bur. Bull. 1 (1903) 23, Philip. Journ. Sci. 1 (1906) Suppl. 62, 5

(1910) Bot. 21, Fl. Manila (1912) 226, Sp. Blancoanae (1918) 166.

Mimosa procera Roxb. Pl. Coromandel 2 (1798) 12, t. 121.

Mimosa coriaria Blanco Fl. Filip. (1837) 734, ed. 2 (1845) 506, ed. 3, 3 (1879) 136.

Luzon (Cagayan to Batangas), Mindoro, Busuanga. Common in thickets, second-growth forests, parang, etc., at low altitudes in regions subject to a long dry season. India to central China southward to tropical Australia.

Local names: Acháan (Ig.); adáan (Ilk., Ting.); adáan-bákir (Pang.); adiañgau (Tag.); ayañgau (Tag.); akleng párang (Ilk., Sbl.); alalanad (Tag., Pamp.); alalañgad (Tag.); anaplá (Mang.); aninaplá (Tag.); aninípla (Tag.); anítap (Pamp.); boak (Ig.); dáan (Ilk.); dariañgau (Tag.); kálai (Ting.); káral (Ibn., Pang.); karáil (Sbl.); karáol (Sbl.); payhód (Bis.); payhót (Bis.); palatañgan (Ilk.).

ALBIZZIA RETUSA Benth. in Hook. Lond. Journ. Bot. 3 (1844) 90, Trans.

Linn. Soc. 30 (1875) 563; Miq. Fl. Ind. Bat. 1¹ (1855) 23; F.-Vill.

Novis. App. (1880) 75; Vidal Phan. Cuming. Philip. (1885) 111,

Rev. Pl. Vasc. Filip. (1886) 120; Merr. in Philip. Journ. Sci. 5

(1910) Bot. 22, Sp. Blancoanae (1918) 166.

Mimosa lebbek Blanco Fl. Filip. (1837) 733, ed. 2 (1845) 506, ed. 3, 3 (1879) 135, non Linn.

Albizzia littoralis Teysm. & Binn. in Nat. Tijdschr. Nederl. Ind. 29 (1867) 259; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 23.

Batan Islands and northern Luzon to Mindanao and Palawan, scattered along the seashore. Nicobar Islands, across Malaya to the Caroline Islands.

Local names: Balúnos (Bik.); kásai (Tag., Bik.); láñgil (Tag.); málinab (Ibn.); panatáyan (Iv.); salangkúgi (Sul.); saplít (Tag.); sintog (Sul.); tagolo (Neg.).

ALBIZZIA SAPONARIA (Lour.) Blume ex Miq. Fl. Ind. Bat. 1¹ (1855) 19;

Benth. in Trans. Linn. Soc. 30 (1875) 561; F.-Vill. Novis. App.

(1880) 75; Vidal Rev. Pl. Vasc. Filip. (1886) 120; Perk. Frag. Fl. Philip. (1904) 6; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 62, 5 (1910) Bot. 24, Fl. Manila (1912) 226.

Mimosa saponaria Lour. Fl. Cochinch. (1790) 653.

Albizzia lucida F.-Vill. Novis. App. (1880) 75; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 23, non Benth.

Albizzia tomentella Merr. l. c. non Miq.

Northern Luzon (Cagayan) to Mindanao. Common in forests, parang, etc., at low and medium altitudes. Indo-China through Malaya to the Moluccas.

Local names: Balógo (Mbo.); balóyo (Sul.); gógo'-kásai (Tag.); gógong-toko (Tag., Pang.); gúgo-tukó (Tag.); gúgong-malatukó (Tag.); haunaki (Bik.); hinaki (C. Bis.); inauaki (Bis., Bik.); kogon toko (Tag.); karikir (Bag.); katumbal (Bag.); malatoko-gugu (Tag.); malatukó (Tag.); malatukú (Tag., Pamp.); maratáoka (Ilk.); maratéka (Ilk.); maratíka (Ilk.); martíga (Ilk.); masugat (Yak.); paltáuin (Tag.); pipi (P. Bis.); salangkúgi (P. Bis., Sul.); salankúgi (P. Bis.); salingígi (Tag.); salinkógi (Tag.); salinkúgi (Bik.); salogígi (S. L. Bis.); salukígi (S. L. Bis.); salungígi (P. Bis.); siangíngi (Mbo.); sankúgi (C. Bis.); sankugu (C. Bis.); saplít (Ilk.); siangkúgi (Mbo.); tagumtagum (Mbo.); tagurarit (Pang.); tambíng (Ig.); tígian (P. Bis.); tinaki (Bis.); unaki (Bik.); upi (If.).

ALBIZZIA SCANDENS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 265, 5 (1910) Bot. 21.

Palawan, *B. S. 829 Foxworthy, Elmer 12972, 12915*. In forests at low altitudes. Borneo.

EXCLUDED SPECIES

ALBIZZIA ODORATISSIMA Benth.; F.-Vill. Novis. App. (1880) 75.

6. ACACIA Willdenow

ACACIA CONCINNA (Willd.) DC. Prodr. 2 (1825) 464; Benth. in Trans.

Linn. Soc. 30 (1875) 531; F.-Vill. Novis. App. (1880) 74; Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 120.

Mimosa concinna Willd. Sp. Pl. 4 (1805) 1039.

Mimosa rugata Lam. Encycl. 1 (1783) 20.

Acacia rugata Ham. in Wall. Cat. (1832) No. 5251, *nomen nudum*; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 28, Fl. Manila (1912) 227.

Acacia philippinarum Benth. in Hook. Lond. Journ. Bot. 1 (1842) 514, p.p., quoad *Cuming 1166*.

Luzon (Union, Benguet, Ilocos Sur), *Cuming 1166, Elmer 5689, B. S. 12557 Fénix*. In thickets at low and medium altitudes. India to southern China and Malaya.

Acacia rugata Ham. is not based on *Mimosa rugata* Lam.

ACACIA CONFUSA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 27.

Acacia richii Forbes & Hemsl. in Journ. Linn. Soc. Bot. 23 (1887) 215; Perk. Frag. Fl. Philip. (1904) 6; Mat. & Hayata Enum. Pl. Formosa (1906) 117, non A. Gray.

Luzon (Zambales), *Merrill 2114, Warburg 13739, F. B. 5922, 7010 Curran, 28231, 28232 Amarillas*. On slopes and in open dry forests at low altitudes,

very local. Formosa (apparently common), there also planted as a shade tree; southern China. An interesting Australian phyllocladous type.

Local names: Ayañgili (Sbl.); ualisen (Sbl.).

ACACIA FARNESIANA (Linn.) Willd. Sp. Pl. 4 (1805) 1083; Benth. in Trans. Linn. Soc. 30 (1875) 502; Miq. Fl. Ind. Bat. 1¹ (1855) 7; F.-Vill. Novis. App. (1880) 74; Vidal Sinopsis Atlas (1883) 25, t. 45, f. C, Rev. Pl. Vasc. Filip. (1886) 119; Perk. Frag. Fl. Philip. (1904) 6; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 28, Fl. Manila (1912) 227, Sp. Blancoanae (1918) 166.

Mimosa farnesiana Linn. Sp. Pl. (1753) 521; Blanco Fl. Filip. (1837) 729; ed. 2 (1845) 504, ed. 3, 3 (1879) 133.

Throughout the Philippines in open grasslands, thickets, etc., at low and medium altitudes, especially common in regions subject to a long dry season. A native of tropical America, introduced from Mexico by the Spaniards, now pantropic.

Local names: Kandaróma (Ilk.); aroma (Sp.); sometimes corrupted into rómas; kambang jipun (Sul.).

ACACIA PENNATA (Linn.) Willd. Sp. Pl. 4 (1805) 1090; Benth. in Trans. Linn. Soc. 30 (1875) 530; F.-Vill. Novis. App. (1880) 75; Vidal Phan. Cuming. Philip. (1885) 111, Rev. Pl. Vasc. Filip. (1886) 120; Perk. Frag. Fl. Philip. (1904) 6; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 29, Sp. Blancoanae (1918) 167.

Mimosa pennata Linn. Sp. Pl. (1753) 522.

Mimosa tenuifolia Blanco Fl. Filip. (1837) 739, ed. 2 (1845) 510, ed. 3, 3 (1879) 141, t. 374, non Linn.

Babuyan Islands to Mindanao. In thickets and forests at low and medium altitudes. Tropical Asia, Africa, and Malaya.

Var. **ARROPHULA** (D. Don) Baker in Hook. f. Fl. Brit. Ind. 2 (1878) 298; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 29.

Acacia arrophula D. Don Prodr. Fl. Nepal. (1825) 247.

Palawan, *B. S. 897 Foxworthy, Elmer 12908*. In thickets and forests at low altitudes. India.

Var. **PLURICAPITATA** (Steud.) Baker in Hook. f. Fl. Brit. Ind. 2 (1878) 298; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 29.

Acacia pluricapitata Steud. Nomencl. ed. 2, 1 (1840) 7; Benth. in Trans. Linn. Soc. 30 (1875) 531.

Luzon (Laguna, Tayabas), Samar, *Elmer 9340, F. B. 26031 Mabesa*. In forests. Burma to Malaya.

Local names: Bayuaing (Ig.); kokó-ti-púsa (Ilk.); sabit (Ig.); salomá-ging-súngo (Ilk.); sapínit (S. L. Bis.); sibog (Tag.).

ACACIA PHILIPPINARUM Benth. in Hook. Lond. Journ. Bot. 1 (1842) 514, quoad *Cuming 943*, excl. *Cuming 1166* et descr. fruct.

Acacia caesia Perk. Frag. Fl. Philip. (1904) 6; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 29, non Willd.

Acacia intsia F.-Vill. Novis. App. (1880) 74; Vidal Sinopsis Atlas (1883) t. 45, f. D, Phan. Cuming. Philip. (1885) 111 (var. *caesia*), Rev. Pl. Vasc. Filip. (1886) 120; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 62, non Willd.

Acacia concinna Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 374, non DC.

Luzon (Ilocos Sur, Nueva Ecija, Pangasinan, Rizal, Bataan, Laguna), *Cuming* 953, *Merrill* 3796, 2812, *Phil. Pl.* 444, 1807, *Elmer* 18159, *Williams* 478, *B. S.* 29518, 26291, *Ramos & Edaño*, 1431, 4578 *Ramos, F. B.* 5267 *Klemme*. In thickets and forests at low altitudes. Endemic. For the status of *Acacia intsia* Willd. and *A. caesia* Willd. see Craib. in *Kew Bull.* (1915) 407-410.

Local names: Dauag (Tag.); dauag-manók (Tag.); kámot-kabág (Tag.); salsalomáge (Ilk.); sibog-áso (Tag.).

EXCLUDED SPECIES

ACACIA ARABICA Willd.

A single and apparently old tree of this exists in Pasig, near the east end of the Pasig bridge. A native of Asia.

ACACIA MANGIUM Willd. (*A. holosericea* A. Cunn.).

Planted at Lamao, also formerly grown in Manila (*Shaw* 485). A native of the Moluccas and Australia.

ACACIA SPECTABILIS A. Cunn.

An Australian species, planted in Baguio.

7. LEUCAENA Bentham

LEUCAENA GLAUCA (Linn.) Benth. in *Hook. Journ. Bot.* 4 (1842) 416, *Trans. Linn. Soc.* 30 (1875) 443; Baker in *Hook. f. Fl. Brit. Ind.* 2 (1878) 290; *Miq. Fl. Ind. Bat.* 1¹ (1855) 41; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 400; *Vidal Sinopsis Atlas* (1883) 25, t. 45, f. B, *Rev. Pl. Vasc. Filip.* (1886) 119; F.-Vill. *Novis. App.* (1880) 74; *Perk. Frag. Fl. Philip.* (1904) 6; *Merr. in Philip. Journ. Sci.* 5 (1910) Bot. 30, Fl. Manila (1912) 227.

Mimosa glauca Linn. *Sp. Pl.* (1753) 520.

Acacia glauca Willd. *Sp. Pl.* 4 (1805) 1075.

Throughout the Philippines in the settled areas at low and medium altitudes, locally gregarious and abundant. Introduced from tropical America. Pantropic.

Local names: Aghó (P. Bis.); aghóg (P. Bis.); ípel (Tag.); ipil ípil (Tag.); kabahéro (C. Bis.); kariskís (Ilk.); komkompítis (Ilk.); loyloi (S. L. Bis.); Santa Elena (Sp.); San Pedro (P. Bis.).

8. SCHRANKIA Willdenow

SCHRANKIA QUADRIVALVIS (Linn.) Merr. in *Philip. Journ. Sci.* 5 (1910) Bot. 30, Sp. Blancoanae (1918) 167.

Mimosa quadrivalvis Linn. *Sp. Pl.* (1753) 522; Blanco Fl. Filip. (1837) 732, ed. 2 (1845) 506, ed. 3, 3 (1879) 135; Merr. in *Govt. Lab. Publ. (Philip.)* 27 (1905) 42.

Schrankia aculeata Willd. *Sp. Pl.* 4 (1805) 1041; Benth. in *Trans. Linn. Soc.* 30 (1875) 441; F.-Vill. *Novis. App.* (1880) 74.

Luzon (Batangas), Mindanao (Misamis), *B. S.* 22461, 26766 *Ramos, Merrill Sp. Blancoanae* 825. In open grasslands and waste places, local. Introduced from Mexico.

Local names: Bulongsíri (C. Bis.); sapínit (Tag.).

9. MIMOSA Linnaeus

MIMOSA PUDICA Linn. Sp. Pl. (1753) 518; F.-Vill. Novis. App. (1880) 74; Vidal Rev. Pl. Vasc. Filip. (1886) 119; Perk. Frag. Fl. Philip. (1904) 7; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 31, Fl. Manila (1912) 228, Sp. Blancoanae (1918) 167.

Mimosa asperata Blanco Fl. Filip. (1837) 732, ed. 2 (1845) 505, ed. 3, 3 (1879) 134, t. 253, non Linn.

Throughout the Philippines in open waste places at low and medium altitudes in the settled areas, common and abundant. Introduced from tropical America, now a pantropic weed.

Local names: Bábain (Ilk.); damohia (Tag.); dilgansúsu (Ilk.); harupai (S. L. Bis.); huya-huya (Bis.); kirómkiróm (S. L. Bis.); makahiá (Pang., Tag.); sipug-sipug (Sub.); tuyag-húyag (P. Bis.); torog-torog (Bik.).

DOUBTFUL SPECIES

MIMOSA BLANCOANA Llanos in Mem. Acad. Cienc. Madr. III 2 (1857) 503; F.-Vill & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 103; F.-Vill. Novis. App. (1880) 74.

This is perhaps a synonym of *Entada phaseoloides* (Linn.) Merr., or perhaps the very imperfect description was based on material originating from two entirely different plants. It is not recognizable with certainty from the description.

10. NEPTUNIA Loureiro

NEPTUNIA DEPAUPERATA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 16.

Luzon (Ilocos Norte), *B. S. 27169, 32898 Ramos*. In open dry fields at low altitudes. Endemic.

NEPTUNIA OLERACEA Lour. Fl. Cochinch. (1790) 654; F.-Vill. Novis. App. (1880) 73; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 12.

Mindanao (Agusan), *Taylor 202*. In shallow lakes and swamps at low altitudes. Pantropic.

11. PROSOPIS Linnaeus

PROSOPIS VIDALIANA Naves in Ephem. "Oriente" (1877) fide F.-Vill., *Prosopis vidaliana* (1877) 1-19, t. 1, 2, Blanco Fl. Filip. ed. 3 (1877-83) t. 392; Vidal Cat. Pl. Prov. Manila (1880) 28, Sinopsis Atlas (1883) 24, t. 44, f. C; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 31, Fl. Manila (1912) 228.

Prosopis juliflora F.-Vill. Novis. App. (1880) 73; Perk. Frag. Fl. Philip. (1904) 7; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 32, Philip. Journ. Sci. 1 (1906) Suppl. 62, non DC.

Manila Bay region, forming dense thickets immediately back of the beach; also in Basilan. Unquestionably introduced from Mexico, probably from the vicinity of Acapulco.

Local names: Aroma (Sp.); properly the name of *Acacia farnesiana* Willd.

12. ADENANTHERA Royen

ADENANTHERA INTERMEDIA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 228, 5 (1910) Bot. 32, Fl. Manila (1912) 229, Sp. Blancoanae (1918) 168.

Mimosa virgata Blanco Fl. Filip. (1837) 737, non Linn.

Mimosa punctata Blanco Fl. Filip. ed. 2 (1845) 508, ed. 3, 3 (1879) 139, non Linn.

Adenanthera pavonina Vidal Sinopsis Atlas (1883) 24, t. 44, f. B, Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 119, non Linn.

Northern Luzon to Palawan and Mindanao. In thickets and forests at low and medium altitudes. Endemic.

Local names: Adambagin (Ilk.); alalañgat (Tag.); bagiroro (Bik.); bahai (P. Bis., Sul.); bugayóng (Ilk.); butarik (Ibn.); kasai (Bis.); kinasaikasai (Tag.); ípil-tanglín (Ilk.); malaságad (Tag.); malatáyon (Pamp.); malatágum (Bik.); matáng-uláng (Tag.); paagáhan (Tag.); pamiásin (Ilk.); sagun-ságum (Bik.); tanglín (Tag.); tadlañgau (Bik.); tanglon (Pamp.); tañgalin (Tag.).

ADENANTHERA PAVONINA Linn. Sp. Pl. (1753) 348; Miq. Fl. Ind. Bat. 1¹ (1855) 46, F.-Vill. Novis. App. (1880) 73.

Occasionally cultivated in Manila; introduced from India, now pantropic in cultivation.

13. ENTADA Adanson

ENTADA PARVIFOLIA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 229, 5 (1910) Bot. 33.

Entada philippinensis Gagnep. in Not. Syst. 2 (1911) 58.

Luzon (Union, Zambales, Bataan), Golo, Busuanga, Cuyo, *B. S.* 4810, 5067, 21375 *Escritor*, 41227 *Ramos*, *F. B.* 20028 *Topacio*, *Hallier*, *Lete* 550, *Merrill* 11557, *Marche* 368. In thickets at low altitudes. The underground parts form a very large somewhat fleshy tuber; the stems are used as a soap substitute. Endemic.

Local names: Dalidigan (Tagb.); hinagi (Sbl.); kati-u (Ilk.).

ENTADA PHASEOLOIDES (Linn.) Merr. in Philip. Journ. Sci. 9 (1914) Bot. 86, Interpret. Herb. Amb. (1917) 235, Sp. Blancoanae (1918) 168, 194.

Lens phaseoloides Linn. in Stickman Herb. Amb. (1754) 18, Amoen. Acad. 4 (1759) 128.

Mimosa entada Linn. Sp. Pl. (1753) 518.

Mimosa scandens Linn. Sp. Pl. ed. 2 (1763) 1501.

Entada scandens Benth. in Hook. Journ. Bot. 4 (1842) 332, Trans. Linn. Soc. 30 (1875) 363; Baker in Hook. f. Fl. Brit. Ind. 2 (1878) 287; F.-Vill. Novis. App. (1880) 73; Vidal Sinopsis Atlas (1883) 24, t. 44, f. A, Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 119; Perk. Frag. Fl. Philip. (1904) 7; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 32.

Adenanthera gogo Blanco Fl. Filip. (1837) 353.

Entada pursaetha DC. Prodr. 2 (1825) 425; Blanco Fl. Filip. ed. 2 (1845) 247, ed. 3, 2 (1878) 96.

Mimosa blancoana Llanos in Mem. Acad. Cienc. Madr. 2 (1859) 503; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 103?

Northern Luzon (Cagayan) to Mindanao and Palawan. In forests at low and medium altitudes. Pantropic.

Local names: Balúgo (Tag., Pamp.); barúgo (S. L. Bis.); bayógo (C. Bis., Tag.); balónos (Bis.); dípai (Ig.); gógong-bákai (Pamp.); gógo (Tag., Bik., Tagb., P. Bis.); gúgo (Tag.); gúgu (Tag.); kézzing (Ibn.); lípai (Ilk.); tamayan (Bag.).

14. **PARKIA** R. Brown

PARKIA HARBESONII Elm. Leaf. Philip. Bot. 5 (1913) 1804.

Palawan, *Elmer 13173, F. B. 27891 Cenabre, Baldemor, & Aduviso, Merrill 9351*. In forests, sea level to an altitude of 150 m. Endemic.

Local name: Butad (Tagb.).

PARKIA JAVANICA (Lam.) Merr. Sp. Blancoanae (1918) 168.

Gleditsia javanica Lam. Encycl. 2 (1788) 466.

Acacia ? javanica DC. Prodr. 2 (1825) 471.

Mimosa biglobosa Roxb. Fl. Ind. ed. 2, 2 (1832) 551, non Jacq.

Parkia roxburghii G. Don Gen. Syst. 2 (1832) 397; Benth. in Trans.

Linn. Soc. 30 (1875) 360; F.-Vill. Novis. App. (1880) 74; Vidal

Sinopsis Atlas (1883) 24, t. 44, f. D, Rev. Pl. Vasc. Filip. (1886)

119; Perk. Frag. Fl. Philip. (1904) 7; Merr. in Philip. For. Bur.

Bull. 1 (1903) 23, Govt. Lab. Publ. (Philip.) 27 (1905) 42, Philip.

Journ. Sci. 1 (1906) Suppl. 62.

Inga timoriana DC. Prodr. 2 (1825) 442.

Mimosa peregrina Blanco Fl. Filip. (1837) 737, ed. 2 (1845) 509, ed.

3, 3 (1879) 139, non Linn.

Acacia niopo Llanos in Mem. Acad. Cienc. Madr. 4 (1858) 508; F.-Vill.

& Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 106, non HBK.

Parkia timoriana Merr. in Philip. Journ. Sci. 5 (1910) Bot. 33, Fl.

Manila (1912) 229.

Luzon (Union to Laguna), Palawan. Common in forests at low and medium altitudes. India to Timor.

Local names: Amarang (Tagb.); bagóen (Ilk.); balái-uák (Ilk.); kúpang (Tag., Sbl., Tagb., Ilk.).

PARKIA SHERFESEI Merr. in Philip. Journ. Sci. 10 (1915) Bot. 9.

Mindanao (Agusan), *F. B. 21962 Sherfesei, Cenabre, & Ponce, 23669, 23670 Razon, 24485 Miras, Sabino, & Oliveros*. Near tidal streams. Endemic.

Local name: Kunding (C. Bis.).

15. **ERYTHROPHLOEUM** Afzelius

ERYTHROPHLOEUM DENSIFLORUM (Elm.) Merr. in Philip. Journ. Sci.

4 (1909) Bot. 267, 5 (1910) Bot. 35; L. Planch. in Ann. Colon. Mus.

Marseille 19 (1911) 304, t. 3, 4, figs.

Cynometra densiflora Elm. Leaf. Philip. Bot. 1 (1907) 222.

Luzon (Cagayan, Tayabas, Rizal, Camarines, Sorsogon), Palawan, Mindanao, (Lanao, Zamboanga), *Elmer 9014, 16686, F. B. 20476, 21831, 21910 Barros, 10272, 10215, 17198 Curran, 24260, 26262 Bernardo, 23369 Ponce, 21635 Lopez, Loher 6056*. In forests at low and medium altitudes. Endemic. This small genus is chiefly African, with one species in Indo-China, one in China, and one in Australia.

Local names: Abihal (Neg.); baris (Tagb.); batik (Tag.); kadir (Ilk.); kalamátau (Tag.); kamátog (Tag.); malabúnan (Bik.); ngirikngík (Neg.); pali. (Lan.); salsál (Neg.); taklóban (Tag.).

16. CYNOMETRA Linnaeus

CYNOMETRA BIFOLIOLATA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 272.

Luzon (Cagayan), *F. B.* 24211 *Barros*, *Warburg* 12087. Along river banks at low altitudes. Endemic.

CYNOMETRA BIJUGA Spanoghe in Linnaea 15 (1841) 201, *nomen nudum*; Miq. Fl. Ind. Bat. 1¹ (1855) 78; Perk. Frag. Fl. Philip. (1904) 7; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 36.

Cynometra whitfordii Elm. Leaf. Philip. Bot. 8 (1915) 2734.

Luzon (Union, Zambales), Palawan, Leyte, Panay, Mindanao, *Lete* 507, *F. B.* 3785 *Curran*, 28844 *Mallonga*, 12727 *Rosenbluth*, *Weber* 1018, *Elmer* 13465. In forests along streams at low and medium altitudes. Ceylon, through Malaya to Timor.

Local names: Ananamsi (C. Bis.); bayág-áso (Lan.); katokabiñgan (Mbo.); lumbadan (Mbo.); malatágum (P. Bis.); namot-namot (Sub., C. Bis.); suhai-bágio (S. L. Bis.); suñot-úlang (P. Bis.).

Var. **MIMOSOIDES** (Wall.) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 36. *Cynometra mimosoides* Wall. Cat. (1832) No. 5817, *nomen nudum*.

Cynometra ramiflora Linn. var. *mimosoides* Baker in Hook. f. Fl. Brit. Ind. 2 (1878) 267.

Panay, Tablas, Mindanao, *Cuming* 1652, *F. B.* 20519, 20504, 20795 *Rafael* & *Ponce*, 20528 *Miranda*, 22462 *Klemme*. In forests at low altitudes. India and Ceylon to the Andaman Islands.

CYNOMETRA CAULIFLORA Linn. Sp. Pl. (1753) 382; F.-Vill. Novis. App. (1880) 71; Naves in Blanco Fl. Filip. (1877-83) t. 213; Vidal Sinopsis Atlas (1883) 24, t. 43, f. H.

Cynometra acutiflora Vidal Rev. Pl. Vasc. Filip. (1886) 118; Ceron Cat. Pl. Herb. Manila (1892) 70, sphalm.

Luzon, formerly cultivated in Manila, *Vidal* 1278, *Loher* 2205, now cultivated at Lamao. Introduced from India or Malaya.

CYNOMETRA COPELANDII (Elm.) Elm. Leaf. Philip. Bot. 8 (March 27, 1915) 2734; Merr. in Philip. Journ. Sci. 10 (April 23, 1915) 13.

Gleditschia copelandii Elm. Leaf. Philip. Bot. 2 (1910) 695.

Sibuyan, *Elmer* 12234. In forests, altitude about 125 m. Endemic.

CYNOMETRA DONGNAINIS Pierre Fl. Forest. Cochinch. 4 (1899) t. 389A; Gagnep. in Lecomte Fl. Gen. Indo-Chine 2 (1913) 155.

Cebu, Mindanao (Butuan, Davao), *F. B.* 6488 *Espinosa*, 20563 *Miranda*, 26244 *Ceballos*. In forests at low and medium altitudes. Cochinchina.

Local name: Matágum (C. Bis.).

CYNOMETRA INAEQUIFOLIA A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 473; F.-Vill. Novis. App. (1880) 71; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 118; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 63, 3 (1908) Bot. 82, 5 (1910) Bot. 36, Sp. Blancoanae (1918) 169.

Schotia speciosa Blanco Fl. Filip. (1837) 356, ed. 2 (1845) 251, ed. 3, 2 (1878) 100, non Jacq.

Luzon (Cagayan, Union, Zambales, Bataan, Rizal, Tayabas, Cavite, Laguna, Batangas). In forests at low and medium altitudes. Endemic, with an allied form in the Malay Peninsula.

Local names: Akakob (Tag.); balitbítan (Tag.); dila-díla Sbl., Tag.); kabilian (Tag.); namot (C. Bis.); olod (Pamp.); palanapoi (Sbl.); uló (Ibn.).

CYNOMETRA LUZONIENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 266, 5 (1910) Bot. 37.

Luzon (Rizal, Tayabas, Camarines), *Merrill 2128, F. B. 23014 Aguilar, 28760 Simeon, B. S. 3286 Ramos p. p.* In forests at low and medium altitudes. Endemic.

Local name: Tañgísang-bágio (Tag.).

CYNOMETRA RAMIFLORA Linn. Sp. Pl. (1753) 382, excl. syn. Rheede; F.-Vill. Novis. App. (1880) 71; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 37.

Luzon (Cagayan, Bulacan, Rizal, Tayabas), *F. B. 7214, 16967 Curran, Whitford 847, Loher 5959*. In forests along streams at low and medium altitudes. Ceylon, through Malaya to tropical Australia.

Local names: Balitbítan (Tag.); komon (Neg.); odling (Bis.); ulá (Ibn.); ulud (Tag.).

CYNOMETRA SIMPLICIFOLIA Harms in Notizbl. Kgl. Bot. Gart. Berlin 3 (1902) 186; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 63, 5 (1910) Bot. 37, Fl. Manila (1912) 236, Sp. Blancoanae (1918) 170. *Crudia spicata* Blanco Fl. Filip. ed. 2 (1845) 261, ed. 3, 2 (1878) 121, p.p., non Willd.

Northern Luzon (Cagayan) to Mindanao and Basilan. In thickets and open dry forests at low and medium altitudes. Endemic.

Local names: Dila-díla (Tag.); lanis (Bag.); makanit (Tag.); mala-tumbága (Tag.); matolog (P. Bis.); núpai (Sul.); pagapus (Mag.); pamalitin (Ilk.); piñgan (Pamp.); siping (Ibn.).

Var. **OBLONGATA** Merr. in Philip. Journ. Sci. 5 (1910) Bot. 37.

Luzon (Rizal), *F. B. 2978 Ahern's collector, B. S. 3349, 5216 Ramos, Warburg 13204*. Habitat of the species. Endemic.

CYNOMETRA WARBURGII Harms in Notizbl. Kgl. Bot. Gart. Berlin 3 (1902) 186; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 37.

Luzon (Cagayan, Ilocos Norte, Nueva Ecija), *Warburg 12086, 12427, B. S. 27338 Ramos, F. B. 22442 Alvarez*. In forests, chiefly near streams at low and medium altitudes. Endemic.

17. KINGIODENDRON Harms

KINGIODENDRON ALTERNIFOLIUM (Elm.) Merr. & Rolfe in Philip. Journ. Sci. 4 (1909) Bot. 267; Merr. op. cit. 5 (1910) Bot. 38.

Cynometra alternifolia Elm. Leaf. Philip. Bot. 1 (1907) 223.

Hardwickia alternifolia Elm. op. cit. (1908) 362.

Luzon (Cagayan, Tayabas, Camarines, Albay), Ticao, Masbate, Samar, Leyte, Panay, Mindanao. In forests at low and medium altitudes. Endemic.

Local names: Bagbalógo (S. L. Bis.); batéte (Tag., Bik., P. Bis.); batíti (P. Bis.); danggái (Tag., Bik., P. Bis.); duká (S. L. Bis., P. Bis.); kalikit (Mbo.); kalitkit (Mbo.); komagaskas (C. Bis.); longbayau (Mbo.); magbalógo (S. L. Bis.); manongbáyo (Mbo.); palina (C. Bis.); parina (C. Bis.); payina (C. Bis.); salalañgin (Bik.); taruñgatiñgan (Bik.); tuaan (C. Bis.).

18. *SINDORA* Miquel

SINDORA INERMIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 314.

Luzon (Camarines), Dinagat, Mindanao (Zamboanga, Cotabato), Sibutu, Jolo, *F. B. 23054 Ferraris, 26505 De Mesa & Magistrado, 21993 Villamil*. In forests along the seashore and at low altitudes inland. Endemic, unless it proves to be identical with the Moluccan *Sindora gale-dupa* Prain.

Local names: Gayugalo (Mag.); kayugalu (Mag.); nito-nitong puti (Bik.); parina (Bik.); sinsud (Sul.); sinsuod (Sul.).

SINDORA SUPA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 198, 5 (1910) Bot. 38.

Sindora wallichii F.-Vill. Novis. App. (1880) 71; Vidal Sinopsis Atlas (1883) 24, t. 42, f. C., Rev. Pl. Vasc. Filip. (1886) 118; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 23, non Benth.

Luzon (Tayabas, Nueva Ecija, Camarines, Albay), Mindoro. In forests at low and medium altitudes. Endemic.

Local names: Manapo (Bik., Tag.); paina (Bik.); parina (Bik.); súpa (Tag., Bik.).

19. *CRUDIA* Schreber

CRUDIA BLANCOI Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 309; Vidal Rev. Pl. Vasc. Filip. (1886) 118; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 39, Sp. Blancoanae (1918) 170.

Crudia spicata Blanco Fl. Filip. ed. 2 (1845) 261, ed. 3, 2 (1878) 121 p. p., t. 244; Vidal Sinopsis Atlas (1883) 24, t. 43, f. B.; F.-Vill. Novis. App. (1880) 71, non Willd.

Apaltoa blancoi Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 19.

Luzon (Pangasinan, Nueva Ecija, Pampanga, Bulacan, Rizal, Laguna, Camarines). In thickets and forests, chiefly along streams at low and medium altitudes. Endemic.

Local names: Bigbiga (Tag.); hintotoor (Tag.); kalatumbága (Tag.); malatumbága (Ilk., Tag., Pamp.); malusúngai (Tag.); ulud (Sbl.).

CRUDIA SUBSIMPLICIFOLIA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 39.

Luzon (Cagayan), Leyte, *F. B. 4287 Klemme, Wenzel 1252*. In forests at low altitudes. Endemic.

Local name: Tambáli (Neg.).

20. *TAMARINDUS* Linnaeus

TAMARINDUS INDICA Linn. Sp. Pl. (1753) 34; Miq. Fl. Ind. Bat. 1^a (1855) 82; Vog. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 39; Blanco Fl. Filip. (1837) 29, ed. 2 (1845) 20, ed. 3, 1 (1877) 39, t. 14; F.-Vill. Novis. App. (1880) 71; Vidal Phan. Cuming. Philip.

(1885) 110, Rev. Pl. Vasc. Filip. (1886) 118, Sinopsis Atlas (1883) 24, t. 43, f. D; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 40, Fl. Manila (1912) 235, Sp. Blancoanae (1918) 179.

The tamarind, planted throughout the settled areas of the Philippines, of prehistoric introduction. Pantropic in cultivation, probably a native of tropical Africa.

Local names: Asam (Sul.); kalamági (Bis., Ibn.); salomági (Ilk.); salamági (Ilk.); salunági (Ting.); sambag (P. Bis.); sambak (Bik.); sambági (Bis.); sambalági (Bik.); sampálok (Tag., Pamp., C. Bis.); sanbag (P. Bis.); tamaríndo (Sp.).

21. INTSIA Thouars

INTSIA ACUMINATA Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 20; Philip. Journ. Sci. 5 (1910) Bot. 40.

Luzon (Cagayan, Tayabas), Merrill 1108, 2584, 2594, F. B. 1413, 7063, 11318 Klemme. In forests near the seashore. Endemic.

Local names: Balahian (Neg.); bayugbúg (C. Bis.); ípil (Ibn., Tag.).

INTSIA BIJUGA (Colebr.) O. Kuntze Rev. Gen. Pl. (1891) 192; Prain in Sci. Mem. Med. Off. Ind. Army 12 (1901) 12; in Philip. Journ. Sci. 1 (1906) Suppl. 63, 3 (1908) Bot. 409, 5 (1910) Bot. 40, Fl. Manila (1912) 235, Interpret. Herb. Amb. (1917) 255, Sp. Blancoanae (1918) 171.

Macrolobium bijugum Colebr. in Trans. Linn. Soc. 12 (1819) 359, t. 17.

Afzelia bijuga A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 467, t. 51; F.-Vill. Novis. App. (1880) 72; Vidal Sinopsis Atlas (1883) 24, t. 42, f. B.; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 24; Perk. Frag. Fl. Philip. (1904) 7.

Eperua decandra Blanco Fl. Filip. (1837) 368, ed. 2 (1845) 259, ed. 3, 2 (1878) 118.

Babuyan Islands and northern Luzon to Mindanao and Palawan. Usually along the seashore, in some localities occurring in inland forests. Madagascar, across Malaya to the Caroline and Fiji Islands.

Local names: ípil (Ibn., Tag., Bik., Tagb., Sul., Bis., Mbo., Lan., Mag.); ípil-lalaó (Tag.); ítíl (Mag.); lábnig (Tag.); muláto (C. Bis.); nála (Sbl.); taal (Tag.); tìgal (Tagb.).

EXCLUDED SPECIES

AFZELIA PALEMBANICA Baker; F.-Vill. Novis. App. (1880) 72.

22. PAHUDIA Miquel

PAHUDIA RHOMBOIDEA (Blanco) Prain in Sci. Mem. Off. Ind. Army 12 (1901) 14; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 63, 5 (1910) Bot. 41, Fl. Manila (1912) 236, Sp. Blancoanae (1918) 171.

Eperua falcata Blanco Fl. Filip. (1837) 369, non Aubl.

Eperua rhomboidea Blanco op. cit. ed. 2 (1845) 260, ed. 3, 2 (1878) 119, t. 281.

Afzelia rhomboidea Vidal Cat. Pl. Prov. Manila (1880) 28, Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 117,

Sinopsis Atlas (1883) 24, t. 42, f. 4; F.-Vill. Novis. App. (1880) 72; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 24.

Northern Luzon (Cagayan) to Mindanao and Palawan. In primary forests at low and medium altitudes, locally abundant. Endemic.

Local names: Apáilit (Pang.); balahiáu (Neg.); baláyong (Tag., C. Bis.); baráong (Bik., S. L. Bis.); bayádgung (Mbo.); baárong (S. L. Bis.); báiong (C. Bis., Buk.); biálung (Mag.); ipil (Ibn., Neg.); magálayau (Ibn.); magáliau (Ibn.); saṅgai (Bik.); tındalo (Sbl., Tag.).

23. BAUHINIA Linnaeus

BAUHINIA ACUMINATA Linn. Sp. Pl. (1753) 375; Vidal Cat. Pl. Prov. Manila (1880) 27; F.-Vill. Novis. App. (1880) 72; Perk. Frag. Fl. Philip. (1904) 8; Hook. f. in Curtis's Bot. Mag. III 58 (1902) t. 7866; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 43, Fl. Manila (1912) 230.

Bauhinia tomentosa Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 111, non Linn.

Luzon (Union, Rizal, Tayabas), Marinduque, Panay. In dry thickets at low and medium altitudes, probably introduced. India to southern China and Malaya.

Local names: Bambáng (Tag.); kulibangbáng (Ilk.).

BAUHINIA AHERNIANA Perk. Frag. Fl. Philip. (1904) 8; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 45.

Bauhinia antipolana Perk. op. cit. 9; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 45.

Bauhinia pinchotiana Perk. op. cit. 12; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 45.

Bauhinia semibifida Vidal Sinopsis Atlas (1883) 24, t. 43, f. 1?; F.-Vill. Novis. App. (1880) 73, non Roxb.

Phanera semibifida Benth. in Miq. Pl. Jungh. (1852) 265 p. p. quoad Cuming 1119.

Luzon (Benguet, Ilocos Sur, Lepanto, Rizal), Mindoro, Palawan, Cebu, Mindanao, Merrill 1237, 1317, 1873, 9189, Phil. Pl. 465, Cuming 1119, McGregor 256, F. B. 12007 Merritt, Clemens 228. In thickets and forests at low and medium altitudes. Endemic.

Local names: Banot (Tag.); banlut (C. Bis.).

BAUHINIA BINATA Blanco Fl. Filip. (1837) 331 (*binnata*), ed. 2 (1845) 231, ed. 3, 2 (1878) 66; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 42; Philip. Journ. Sci. 5 (1910) Bot. 43, Sp. Blancoanae (1918) 72.

Bauhinia pinnata Walp. in Linnaea 16 (1846) Litt.-Ber. 53.

Phanera blancoi Benth. in Miq. Pl. Jungh. (1852) 264; Miq. Fl. Ind. Bat. 1^a (1855) 70.

Bauhinia blancoi Baker in Hook. f. Fl. Brit. Ind. 2 (1878) 278; Hemsl. Bot. Challenger Exp. 1⁴ (1884) 146; F.-Vill. Novis. App. (1880) 72; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 117; Perk. Frag. Fl. Philip. (1904) 8.

Luzon (Zambales, Tayabas), Coron, Palawan, Dumarán, Cebu, Panay, Negros, Bohol, Mindanao, Basilan, Sibutu, Merrill 1972, 5294, Sp. Blancoanae 998, Warburg 13746, F. B. 3545, 13705 Curran, Elmer 12031. In thickets along the seashore, tidal streams, etc.; comparison made at Kew

shows the Siam material to be identical with the Philippine specimens. Siam, Timor Laut.

Local names: Alibihil (Bis.); alibangbáng (Tag.); malabánót (Tag.).

BAUHINIA CUMINGIANA (Benth.) F.-Vill. Novis. App. (1880) 73; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 116; Perk. Frag. Fl. Philip. (1904) 9; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 63, 5 (1910) Bot. 44, Sp. Blancoanae (1918) 171.

Bauhinia scandens Blanco Fl. Filip. (1837) 332, ed. 2 (1845) 232, ed. 3, 2 (1878) 68, t. 76, non Linn.

Phanera cumingiana Benth. in Miq. Pl. Jungh. (1852) 263; Miq. Fl. Ind. Bat. 1¹ (1855) 68.

Bauhinia vahlii F.-Vill. Novis. App. (1880) 72, non W. & A.

Phanera vahlii Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 76, non Benth.

Northern Luzon (Cagayan) to Mindanao. Common in forests at low and medium altitudes. Endemic.

Local names: Agki (Pamp.); agpoi (Tag., Bik.); arabahau (Mbo.); aro (Bag.); balagon (Chab.); banot (Tag.); impid (Bik.); impig (Bik.); kalibangbáng (P. Bis.) kali-bangbáng-anai (Mbo.); libangbáng (P. Bis.); lúpig (Tag.); ogpoi (Tag.); oplíg (Ilk.); salibangbángan (S. L. Bis., P. Bis.); ugpoi (Tag., Pamp.); umpig (Ibn.); umpík (Ibn.); uplíg (Ilk.); upling (Ilk.).

BAUHINIA DOLICHOCALYX Merr. in Philip. Journ. Sci. 3 (1908) Bot. 231, 5 (1910) Bot. 44, Sp. Blancoanae (1918) 171.

Bauhinia grandiflora Blanco Fl. Filip. (1837) 332, ed. 2 (1845) 231, ed. 3, 2 (1878) 67; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 42, Philip. Journ. Sci. 2 (1907) Bot. 422 (excl. *B. acuminata*), non Juss.

Bauhinia variegata F.-Vill. Novis. App. (1880) 73, non Linn.

Luzon (Batangas), *F. B. 7756 Curran & Merritt, Merrill Sp. Blancoanae* 531. On dry slopes at low altitudes. Endemic.

Local names: Boñgalon (Tag.); malabanot (Tag.).

BAUHINIA HALLIERIANA Elm. Leaf. Philip. Bot. 2 (1910) 691.

Romblon, *Elmer 12172, Hallier*. In thickets at low altitudes. Endemic.

Local name: Bika-bíka (P. Bis.).

BAUHINIA LEPTOPUS Perk. Frag. Fl. Philip. (1904) 10; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 44.

Bauhinia copelandii Merr. in Philip. Journ. Sci. 3 (1908) Bot. 230.

Bauhinia bidentata F.-Vill. Novis. App. (1880) 72; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 117, non Jack.

Phanera bidentata Benth. in Miq. Pl. Jungh. (1852) 263 p. p. quoad *Cuming 1744*.

Luzon (Tayabas, Camarines), Samar, Leyte, Panay, Negros, Mindanao, *Cuming 1744, Copeland 1429, Warburg 12824, 14689, Baker 3252, Wenzel 639, 1775, Clemens 1059, Elmer 10477, Merrill Phil. Pl. 1687, F. B. 21251 Alvarez, B. S. 28957, 31031 Ramos & Edaña*. In forests at low and medium altitudes. A variety in Java.

Local names: Kalibangbang (Bag.); malakmi (Lan.).

BAUHINIA MALABARICA Roxb. Hort. Beng. (1814) 31, *nomen nudum*, Fl. Ind. ed. 2, 2 (1832) 321; F.-Vill. Novis. App. (1880) 72; Vidal Cat. Pl. Prov. Manila (1880) 27, Rev. Pl. Vasc. Filip. (1886) 117; Perk. Frag. Fl. Philip. (1904) 8; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 43, Sp. Blancoanae (1918) 172.

Piliostigma acidum Benth. in Miq. Pl. Jungh. (1852) 261; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 470; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 118.

Bauhinia tomentosa Blanco Fl. Filip. (1837) 330, ed. 2 (1845) 230, ed. 3, 2 (1878) 65, t. 118, non Linn.

Bauhinia purpurea Vidal Sinopsis Atlas (1883) 24, t. 43, f. A, non Linn.

Luzon (Ilocos Norte to Laguna), very common on open dry slopes in regions subject to a long dry season. India to Indo-China, Java, and Timor.

Local names: Alibangbáng (Tag.); alibangbáng (Tag., Bis., Pamp.); balibambán (Pamp.); kalibanbáng (Pang., Tag.); kalibangbáng (Ilk.).

BAUHINIA MERRILLIANA Perk. Frag. Fl. Philip. (1904) 10; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 45.

Palawan, Mindanao (Zamboanga), *Merrill 694, Elmer 12723, B. S. 192 Bermejos, 37308, 36722 Ramos & Edaño, F. B. 3554 Curran*. In thickets and forests at low altitudes. Endemic.

BAUHINIA MONANDRA Kurz in Journ. As. Soc. Beng. 42² (1873) 73; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 265, 5 (1910) Bot. 46, Fl. Manila (1912) 231.

Bauhinia krugii Urban in Ber. Deutsch. Bot. Ges. 3 (1885) 83.

Bauhinia kappleri Sagot in Ann. Sci. Nat. Bot. VI 13 (1882) 317; Perk. Frag. Fl. Philip. (1904) 13; Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 17.

Bauhinia subrotundifolia F.-Vill. Novis. App. (1880) 72; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 82, non Cav.

Fairly common in cultivation in the settled areas at low altitudes, central Luzon to Mindanao. A native of tropical America, now pantropic.

Local names: Alibangbáng (Tag.); cinco llagas (Sp.); fringon (Sp.); mainuma (Pamp.); mimang (C. Bis.).

BAUHINIA NYMPHAEIFOLIA Perk. Frag. Fl. Philip. (1904) 11; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 45.

Bauhinia fulva F.-Vill. Novis. App. (1880) 72, non Blume.

Luzon (Ilocos Sur, Abra), *Cuming 1180 (1181 in some herbaria), B. S. 27040 Ramos*. In forests at low altitudes. Endemic.

BAUHINIA PAUCIFLORA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 13.

Luzon (Tayabas), *B. S. 13113 Foxworthy & Ramos*. In forests at low altitudes. Endemic.

BAUHINIA PERKINSIAE Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 21, Philip. Journ. Sci. 5 (1910) Bot. 45.

Bauhinia ferruginea Perk. Frag. Fl. Philip. (1904) 9, non Roxb.

Palawan, *Merrill 731, 9190, F. B. 3553 Curran*. In thickets at low altitudes. Endemic.

BAUHINIA PURPUREA Linn. Sp. Pl. (1753) 375; Blanco Fl. Filip. ed. 2 (1845) 231, ed. 3, 2 (1878) 66; F.-Vill. Novis. App. (1880) 73; Merr. Sp. Blancoanae (1918) 172.

Bauhinia castrata Blanco Fl. Filip. (1837) 331.

Luzon (Manila, Los Baños), Merrill 8372, *Sp. Blancoanae* 1050. A native of tropical Asia, introduced and cultivated in the Philippines.

Local name: Alibangbáng (Tag.).

BAUHINIA SUBGLABRA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 230, 5 (1910) Bot. 44.

Palawan, B. S. 821 Foxworthy, Elmer 12962. In forests at low altitudes. Endemic.

BAUHINIA TOMENTOSA Linn. Sp. Pl. (1753) 375; F.-Vill. Novis. App. (1880) 72; Vidal Rev. Pl. Vasc. Filip. (1886) 117; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 43, Fl. Manila (1912) 230.

Bauhinia binata Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 19, non Blanco.

Cultivated in Manila and in other towns, introduced from tropical Asia.

BAUHINIA WARBURGII Perk. Frag. Fl. Philip. (1904) 12; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 46.

Luzon (Apayao, Tayabas, Camarines), Samar, Leyte, B. S. 28176 *Fénix*, 24384 *Ramos*, 24799 *Edaño*, F. B. 11338 *Curran*, Warburg 12823, Wenzel 1757. In forests at low altitudes. Endemic.

BAUHINIA WHITFORDII Elm. Leaf. Philip. Bot. 1 (1907) 229; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 44.

Luzon (Benguet, Cagayan, Zambales, Bataan), Elmer 8897, Castillo, F. B. 6009 *Curran*. In forests and thickets at medium and low altitudes. Endemic.

Local names: Agpoi (Sbl.); atiklanan (Ig.); chipig (Ig.); ugpoi (Tag.); umpíg (Ibn.).

DOUBTFUL AND EXCLUDED SPECIES

BAUHINIA ELONGATA Kunth.; F.-Vill. Novis. App. (1880) 73.

BAUHINIA INERMIS Perr. in Mém. Soc. Linn. Paris 3 (1824) 102, *nomen nudum*.

BAUHINIA KHASIANA Baker; F.-Vill. l. c.

BAUHINIA ? LATISILIIQUA Cav. Ic. 5 (1799) 5, t. 407; F.-Vill. Novis. App. (1880) 73; Vidal Phan. Cuming. Philip. (1886) 117.

This is a mixture of a *Bauhinia* (leaves) and a *Mezoneurum* (fruits) = *Mezoneurum latisiliquum* (Cav.) Merr.

BAUHINIA LUNULARIA Cav. Ic. 5 (1799) 4, t. 407; DC. Prodr. 2 (1825) 512; F.-Vill. Novis. App. (1880) 72; Vidal Rev. Pl. Vasc. Filip. (1886) 117.

"Habitat in Calávan [Calauan, Laguna Province, Luzon] et Acapulco [Mexico], viciniis" Cavanilles. This is a species of the section *Casparia* and is undoubtedly of American, not Philippine origin; many of the Malaspina Expedition plants were erroneously localized.

BAUHINIA RETUSA Ham.; F.-Vill. Novis. App. (1880) 72.

BAUHINIA RUFA Grah.; F.-Vill. Novis. App. (1880) 72.

BAUHINIA SUBROTUNDIFOLIA Cav. Ic. 5 (1799) 4, *t.* 406; DC. Prodr. 2 (1825) 512; Vidal Rev. Pl. Vasc. Filip. (1886) 117.

"Habitat in Calávan duodecim leucis a Manila et etiam in Acapulco viciniis" Cavanilles. This belongs in the section *Casparia* and is undoubtedly American, not Philippine; see *B. lunularia* Cav. above.

BAUHINIA RACEMOSA Lam.; F.-Vill. Novis. App. (1880) 72.

24. KOOMPASSIA Maingay

KOOMPASSIA EXCELSA (Becc.) Taub. in Engl. & Prantl Nat. Pflanzenfam. 3³ (1891) 156; Bericht Deutsch. Bot. Ges. 10 (1892) 641, *t.* 32, *f.* 1-3; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 12.

Abauria excelsa Becc. Malesia 1 (1877) 169.

Palawan, *F. B.* 21580 *Danao*. In dense forests at low altitudes. Borneo. Local name: Mañggis (Tagb.).

25. CASSIA Tournefort

CASSIA ALATA Linn. Sp. Pl. (1753) 378; Blanco Fl. Filip. (1837) 339, ed. 2 (1845) 237, ed. 3, 2 (1878) 77, *t.* 124 bis; Miq. Fl. Ind. Bat. 1¹ (1855) 93; F.-Vill. Novis. App. (1880) 70; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 462; Vidal Rev. Pl. Vasc. Filip. (1886) 116; Perk. Frag. Fl. Philip. (1904) 14; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 63, 3 (1908) Bot. 82, 5 (1910) Bot. 50, Fl. Manila (1912) 234, Sp. Blancoanae (1918) 174.

Herpetica alata Raf. Sylv. Tellur. (1838) 123.

Throughout the Philippines in the settled areas at low and medium altitudes, locally abundant; occasionally planted. Introduced from tropical America, now pantropic.

Local names: Adadisi (Ting.); akapulko (Sul., Tag.); ancharási (Ig.); andadási (Ilk.); andadási-a-dadakkél (Ilk.); andadasi-ñg-bugbugtóng (Ilk.); andalan (Sul.); bayabásin (Tag.); bikas-bíkas (Tag.); buni-buni (Bag.); gamót-sa-búni (Tag.); kapúrko (Tag.); kapis (Sub.); katánda (Tag.); kasítas (Bik., Bis.); pakagonkon (Tag.); pakayomkom-kastila (Pamp.); palo-china (Bis.); sunting (C. Bis.); sonting (Tag.).

CASSIA DIVARICATA Nees & Blume Syll. Ratisb. 1 (1824) 91; Miq. Fl. Ind. Bat. 1¹ (1855) 97; Benth. in Trans. Linn. Soc. 27 (1871) 554; Rolfe in Journ. Bot. 23 (1885) 212; Vidal Rev. Pl. Vasc. Filip. (1886) 116; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 49.

Luzon (Benguet, Bontoc, Lepanto, Zambales), *Elmer* 5996, *F. B.* 10928 *Curran*, *Vanoverbergh* 731, *Pascasio* 507. In thickets or forests at medium altitudes, ascending to 1,600 m. Java.

Local name: Ataatab (Ig.).

CASSIA FISTULA Linn. Sp. Pl. (1753) 377; Blanco Fl. Filip. (1837) 339, ed. 2 (1845) 237, ed. 3, 2 (1878) 76, *p. p. t.* 120; Miq. Fl. Ind. Bat. 1¹ (1855) 89; F.-Vill. Novis. App. (1880) 70; Vidal Sinopsis Atlas

(1883) 24, t. 42, f. E, Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 116; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 47, Sp. Blancoanae (1918) 174.

Northern Luzon to Mindanao and Palawan, occasionally planted. A native of tropical Asia, introduced in the Philippines, now pantropic in cultivation.

Local names: Bítsula (C. Bis.); caña fistula (Sp.); kaña-péstula (Ibn.); kaña-pístola (Tag.); fistula (C. Bis.); ibabau (Bis.); lombayong (Bis.); lapad-lapad (Tagb.).

CASSIA HIRSUTA Linn. Sp. Pl. (1753) 378; F.-Vill. Novis. App. (1880) 70; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 30, Philip. Journ. Sci. 5 (1910) Bot. 50, Fl. Manila (1912) 234, Sp. Blancoanae (1918) 173.

Cassia longisiliqua Blanco Fl. Filip. (1837) 338, non Linn. f.

Cassia sulcata Blanco Fl. Filip. ed. 2 (1845) 236, ed. 3, 2 (1878) 76, non DC.

Luzon (Manila, Rizal, Laguna). Occassional in waste places in the settled areas at low altitudes; a native of tropical America, now pantropic.

Local names: Balbalatuñgan (Tag.); katanda (Tag.); tighiman (Tag.).

CASSIA JAVANICA Linn. Sp. Pl. (1753) 379; Miq. Fl. Ind. Bat. 1¹ (1855) 90; F.-Vill. Novis. App. (1880) 70; Vidal Sinopsis Atlas (1883) 24, t. 42, f. D, Rev. Pl. Vasc. Filip. (1886) 116; Perk. Frag. Fl. Philip. (1904) 14; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 48, Sp. Blancoanae (1918) 174.

Cassia fistula Blanco Fl. Filip. (1837) 339, ed. 2 (1845) 237, ed. 3, 2 (1878) 76, p. p., non Linn.

Cassia nodosa F.-Vill. Novis. App. (1880) 70; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 116, non Ham.

Northern Luzon to Palawan and Mindanao. In open places, thin forests, etc., at low and medium altitudes. Not certainly representing the Linnean species, but perhaps referable to *Cassia nodosa* Ham. Malaysia.

Var. **PUBIFOLIA** Merr. in Philip. Journ. Sci. 5 (1910) Bot. 48.

Luzon (Ilocos Sur, Bulacan, Rizal), *F. B. 5239 Klemme, B. S. 21726 Ramos, Merrill 1313, 2639, Phil. Pl. 1480, F. B. 1173 Ahern's collector*. Habitat of the species. Indo-China through Malaya to the Moluccas, the variety endemic.

Local names: Anchoan (Bik.); anchohan (Tag.); apad-apad (Sul.); apóstola (Tag.); bagiroro (Bik.); bañgiróro (Bik.); caña-fístula (Sp.); duláueng (Ibn.); dúyong (Ibn.); fugáyong (Ibn.); fístula (Kuy.); gale-abod (Sub.); kilkil (Sul.); kamantígi (Bik.); malatágum (Bik.); narang-dauél (Ilk.); pístula (Tag.); tualing bakulau (Sul.).

CASSIA MIMOSOIDES Linn. Sp. Pl. (1753) 379; Blanco Fl. Filip. (1837) 340, ed. 2 (1845) 237, ed. 3, 2 (1878) 78; Miq. Fl. Ind. Bat. 1¹ (1855) 101; F.-Vill. Novis. App. (1880) 71; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 116; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 51, Sp. Blancoanae (1918) 174.

Northern Luzon to Mindanao. In open grasslands at low and medium altitudes, in some regions ascending to 1,500 m. India to southern China southward through Malaya to Australia.

Local names: Karagain (Bag.); kilkidis (Bon.).

CASSIA MINDANAENSIS Merr. in Philip. Journ. Sci. 20 (1922) 388.

Mindanao (Davao), *F. B. 28245 Mataya*. Along streams at low altitudes. Endemic.

CASSIA OCCIDENTALIS Linn. Sp. Pl. (1753) 377; Blanco Fl. Filip. (1837) 338, ed. 2 (1845) 236, ed. 3, 2 (1878) 75, *t. 73*; F.-Vill. Novis. App. (1880) 70; Vidal Phan. Cuming. Philip. (1885) 110; Rev. Pl. Vasc. Filip. (1886) 115; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 50, Fl. Manila (1912) 234, Sp. Blancoanae (1918) 173.

Throughout the Philippines at low and medium altitudes, a weed in waste places in and about towns. A native of tropical America, now pantropic.

Local names: Andadási (Ilk.); balátong-áso (Tag.); duda (C. Bis.); gulinggam (Sul.); kabal-kabálan (Tag.); katanġan-áso (Tag.); suka (Ig.); sumting (S. L. Bis.); tambalisa (Tag.); tighiman (Tag.).

CASSIA SIAMEA Lam. Encycl. 1 (1785) 648; Benth. in Trans. Linn. Soc. 27 (1871) 549; Baker in Hook. f. Fl. Brit. Ind. 2 (1878) 264; F.-Vill. Novis. App. (1880) 71; Vidal Rev. Pl. Vasc. Filip. (1886) 116; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 51, Fl. Manila (1912) 233.

Cassia florida Vahl Symb. 3 (1794) 57; Miq. Fl. Ind. Bat. 1¹ (1855) 98; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 24.

Cassia arayatsensis Naves in Blanco Fl. Filip. (1877-83) *t. 426*, non Llanos.

A commonly cultivated shade tree in the larger towns of the Philippines. A native of tropical Asia, now pantropic in cultivation.

Local name: Acacia (Sp.).

CASSIA SOPHERA Linn. Sp. Pl. (1753) 379; F.-Vill. Novis. App. (1880) 70; Vidal Rev. Pl. Vasc. Filip. (1886) 116; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 30, Philip. Journ. Sci. 5 (1910) Bot. 50.

Northern to central Luzon. An occasional weed in the settled areas at low and medium altitudes. A pantropic species of American origin.

Local name: Andadási (Ilk.).

CASSIA TIMORIENSIS DC. Prodr. 2 (1825) 499; Miq. Fl. Ind. Bat. 1¹ (1855) 99; F.-Vill. Novis. App. (1880) 71; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 115; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 63, 5 (1910) Bot. 51, Sp. Blancoanae (1918) 173.

Cassia arayatsensis Llanos Frag. Pl. Filip. (1851) 71; F.-Vill & Naves in Blanco Fl. Filip. 4¹ (1880) 55.

Cassia montana Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t. 452*, non Heyne.

Luzon (Ilocos Sur, Pangasinan, Nueva Ecija, Tarlac, Pampanga, Bulacan, Bataan, Rizal, Laguna). In thickets at low and medium altitudes. India to Indo-China and Malaya.

Local names: Bagau (Tag.); bagauak (Tag.); balakbak (Tag.); bayakbak (Pamp.); isar (Ilk.); malakatúdai (Pang.); malakatúrai (Tag.); malapatpát (Tag.); malamalunggáian (Tag.).

CASSIA TORA Linn. Sp. Pl. (1753) 376; Blanco Fl. Filip. (1837) 337, ed. 2 (1845) 235, ed. 3, 2 (1878) 74, *t.* 122; Miq. Fl. Ind. Bat. 1¹ (1855) 95; Vog. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 39; F.-Vill. Novis. App. (1880) 70; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 115; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 49, Fl. Manila (1912) 234, Sp. Blancoanae (1918) 173.

Cassia obtusifolia Linn. op. cit. 377; Miq. Fl. Ind. Bat. 1¹ (1855) 95; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 30.

Throughout the Philippines, a very common weed in the settled areas at low and medium altitudes. Pantropic, where native uncertain.

Local names: Andadási (Ilk.); andadási-nga-dadakkél (Ilk.); balátong-áso (Pang., Tag.); baho-baho (Bis.); halu-halu (Sul.); katanda (Tag.); katandang-áso (Tag.); monggo-monggóhan (Tag.).

EXCLUDED SPECIES

CASSIA MONTANA Heyne; F.-Vill. Novis App. (1880) 71.

CASSIA DIPHYLLA Linn.

A recently introduced plant cultivated at Lamao.

CASSIA GLAUCA Lam.; F.-Vill. Novis. App. (1880) 71; Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t.* 426bis; Vidal Rev. Pl. Vasc. Filip. (1886) 115; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 49.

The Philippine records of this species were based on specimens cultivated in Manila. It apparently no longer occurs in the Archipelago. A native of tropical Asia, now widespread in cultivation as a shade tree. Its proper name is apparently *Cassia surattensis* Burm. f. Fl. Ind. (1768) 97.

CASSIA BACILLARIS Linn. f.

A native of tropical America, a recent introduction, rare in cultivation in Manila.

CASSIA DIVARICATA Nees.

A native of tropical Asia, recently introduced and planted at Los Baños.

26. GLEDITSCHIA Clayton

GLEDITSCHIA ROLFEI Vidal Rev. Pl. Vasc. Filip. (1886) 115; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 63, 5 (1910) Bot. 51.

Gleditschia celebica Koord. Meded. Lands Plantent. 19 (1898) 433; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 24.

Luzon (Pampanga, Bataan, Rizal, Laguna, Tayabas, Batangas, Camarines, Sorsogon), Negros, Mindanao (Zamboanga). In forests at medium altitudes. Celebes.

Local names: Tahid-labúyo (Tag.); tiri (Tag.).

27. *PTEROLOBIUM* R. Brown

PTEROLOBIUM MEMBRANULACEUM (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 22, Philip. Journ. Sci. 2 (1907) Bot. 433, 5 (1910) Bot. 52, Sp. Blancoanae (1918) 175.

Mimosa membranulacea Blanco Fl. Filip. (1837) 739.

Reichardia pentapetala Blanco op. cit. ed. 2 (1845) 233, ed. 3, 2 (1878) 71.

Pterolobium indicum F.-Vill. Novis. App. (1880) 70; Vidal Sinopsis Atlas (1883) 24, t. 42, f. G, Rev. Pl. Vasc. Filip. (1886) 114; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 41, non A. Rich.

Luzon (Bulacan, Rizal), *Merrill Sp. Blancoanae* 454, 664, *Phil. Pl.* 488, *Loher* 5911, *B. S.* 12264 *Foxworthy*, *F. B.* 1837, 1984 *Ahern's collector*. In thickets about cliffs, etc., at low and medium altitudes. Endemic.

Local name: Dauag-manók (Tag.).

28. *DELONIX* Rafinesque

DELONIX REGIA (Boj.) Raf. Fl. Tellur. 2 (1836) 92; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 52, Fl. Manila (1912) 231.

Poinciana regia Boj. in Curtis's Bot. Mag. 56 (1829) t. 2884; F.-Vill. Novis. App. (1880) 70; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 451; Vidal Cat. Pl. Prov. Manila (1880) 27.

A native of Madagascar now extensively cultivated in the Philippines as an ornamental shade tree; the fire tree, flame tree, or flamboyant, locally known as *arbol de fuego* and as *caballero*. Pantropic in cultivation.

29. *CAESALPINIA* Linnaeus

CAESALPINIA CRISTA Linn. Sp. Pl. (1753) 380, excl. syn. Fl. Zeyl. 157, non ed. 2 (1762) 544, nec aliorum; Urban Symb. Antill. 2 (1900) 269; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 53, Fl. Manila (1912) 232, Sp. Blancoanae (1918) 175.

Guilandina bonduc Linn. Sp. Pl. (1753) 381, non ed. 2 (1762) 545.

Guilandina bonducella Linn. Sp. Pl. ed. 2 (1762) 545; Blanco Fl. Filip. (1837) 343, ed. 2 (1845) 239, ed. 3, 2 (1878) 81.

Caesalpinia bonducella Flem. in As. Research. 11 (1810) 159; F.-Vill. Novis. App. (1880) 69; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 64.

Guilandina crista Small Fl. Southeast. U. S. (1903) 591.

Throughout the Philippines in thickets along and near the seashore. Pantropic.

Local names: Bangbang (C. Bis.); bayag-kambing (Tag.); bebit (Sub.); binít (Bik.); bugtong (Bis.); dalagdag (Tag.); dalugdug (Tag., Bis.); dauer (Ilk.); kalambibít (C. Bis.); kalumbibít (Tag., Pang.); kamaunggi (Sul.); kamot-kabag (Tag.); sabinit (Bik.); simbar (Bag.); singor (Ilk.).

CAESALPINIA JAYABO Maza in Anal. Soc. Esp. Hist. Nat. 19 (1890) 234; Merr. Interpret. Herb. Amb. (1917) 261.

Caesalpinia bonduc Roxb. Hort. Beng. (1814) 32; F.-Vill. Novis. App. (1880) 69, non *Guilandina bonduc* Linn.

Guilandina bonduc Linn. Sp. Pl. ed. 2 (1762) 545, p. p.; Miq. Fl. Ind.

Bat. 1¹ (1855) 113; Vog. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 37, non Linn. Sp. Pl. (1753) 381.

Caesalpinia crista Perk. Frag. Fl. Philip. (1904) 15, non Linn.

Guilandina major Small Fl. Southeast. U. S. (1903) 591.

Guilandina bonduc Linn. var. *majus* DC. Prodr. 2 (1825) 480.

Caesalpinia glabra in Philip. Journ. Sci. 5 (1910) Bot. 54, non *Guilandina glabra* Mill.

Babuyan Islands, Palawan, Mindanao, *B. S. 10650* McGregor, 228 *Bermijos*, Merrill 842, Clemens 755, 1182, 863, Elmer 11917. In forests, ascending to about 1,000 m. Pantropic.

CAESALPINIA NUGA (Linn.) Ait. Hort. Kew ed. 2, 3 (1811) 32; F.-Vill. Novis. App. (1880) 69; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 114; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 54, Fl. Manila (1912) 232, Sp. Blancoanae (1918) 176. *Guilandina nuga* Linn. Sp. Pl. ed. 2 (1762) 546; Blanco Fl. Filip. (1837) 344, ed. 2 (1845) 240, ed. 3, 2 (1878) 81, *t. 150*. *Caesalpinia laevigata* Perr. in Mém. Soc. Linn. Paris 3 (1824) 104; C. B. Rob. in Philip. Journ. Sci. 3 (1908) 304.

Throughout the Philippines in tidal swamps, thickets along the seashore, etc. Pantropic.

Local names: Bakaig (Tag.); binít (Bik.); kalauinít (Tag.); kabít-kábag (Tag.); kāmít-kabág (Tag.); sagmít (Tag.); sampinít (P. Bis.); sapanít (Sbl.); sapinít (Tag., S. L. Bis.); suba (Sul.).

CAESALPINIA PULCHERRIMA (Linn.) Sw. Obs. (1791) 166; Miq. Fl. Ind. Bat. 1¹ (1855) 111; F.-Vill. Novis. App. (1880) 69; Vidal Rev. Pl. Vasc. Filip. (1886) 114; Perk. Frag. Fl. Philip. (1904) 15; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 29, Philip. Journ. Sci. 5 (1910) Bot. 54, Fl. Manila (1912) 232, Sp. Blancoanae (1918) 175.

Poinciana pulcherrima Linn. Sp. Pl. (1753) 380; Blanco Fl. Filip. (1837) 333, ed. 2 (1845) 232, ed. 3, 2 (1878) 69, *t. 112*.

Cultivated throughout the settled areas in the Philippines, in some regions naturalized. An early introduction from tropical America, now pantropic.

Local name: Caballero (Sp.), in all provinces.

CAESALPINIA SAPPAN Linn. Sp. Pl. (1753) 381; Blanco Fl. Filip. (1837) 335, ed. 2 (1845) 234, ed. 3, 2 (1878) 72, *t. 121*; Miq. Fl. Ind. Bat. 1¹ (1855) 108; F.-Vill. Novis. App. (1880) 69; Vidal Sinopsis Atlas (1883) 24, *t. 42, f. C*; Rev. Pl. Vasc. Filip. (1886) 114; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 461; Merr. Fl. Manila (1912) 232, Philip. Journ. Sci. 5 (1910) Bot. 55, Sp. Blancoanae (1918) 175.

Biancaea sappan Todaro Hort. Bot. Panorm. (1876) 3.

Caesalpinia minutiflora Elm. Leaf. Philip. Bot. 5 (1913) 1803.

Throughout the Philippines at low and medium altitudes in dry thickets, parang, etc., locally abundant. Perhaps an introduced plant in the Archipelago, but if so then of prehistoric introduction. India to Malaya.

Local names: Hápang (Sbl.); sápag (Ilk., Bis., Tag.); sappán (Ilk., Tag.); sibukáu (Tag., Sul., Bis.).

CAESALPINIA SEPIARIA Roxb. Hort. Beng. (1814) 32, *nomen nudum*, Fl. Ind. ed. 2, 2 (1832) 360; F.-Vill. Novis. App. (1880) 69; Vidal Rev. Pl. Vasc. Filip. (1886) 114; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 55.

Caesalpinia benguetensis Elm. Leaflet. Philip. Bot. 1 (1907) 226.

Mezoneurum benguetense Elm. op. cit. 1 (1908) 362.

Luzon (Isabela, Benguet), *Merrill Phil. Pl. 1785, Williams 1206, Elmer 5888, 8720, B. S. 8094 Ramos*. In thickets about limestone cliffs and boulders, altitude about 1,200 m. India to Japan southward to Malaya, introduced in tropical Africa, America, and Australia.

Local name: Puto (Ig.).

EXCLUDED SPECIES

CAESALPINIA MIMOSOIDES Lam.; F.-Vill. Novis. App. (1880) 69.

30. MEZONEURUM Desfontaines

MEZONEURUM CUCULLATUM (Roxb.) W. & A. Prodr. (1834) 283; Baker in Hook. f. Fl. Brit. Ind. 2 (1878) 258; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 56.

Caesalpinia cucullata Roxb. Hort. Beng. (1814) 32, *nomen nudum*, Fl. Ind. ed. 2, 2 (1832) 358.

Mezoneurum macrophyllum Blume ex Miq. Fl. Ind. Bat. 1¹ (1855) 104.

Luzon (Laguna), Mindanao (Lanao), *Elmer, Clemens 922*. In forests along streams and lakes at medium altitudes. India to Yunnan, Indo-China, Andaman Islands, and Java.

MEZONEURUM LATISILIQUUM (Cav.) Merr. in Philip. Journ. Sci. 4 (1909) Bot. 268, 5 (1910) Bot. 57, *Sp. Blancoanae* (1918) 176.

Bauhinia ? latisiliqua Cav. Ic. 5 (1799) 5, t. 408 p. p. (excl. fol.).

Mezoneurum glabrum Desf. in Mém. Mus. Paris 4 (1818) 245, t. 10; DC. Prodr. 2 (1825) 484; F.-Vill. Novis. App. (1880) 70; Miq. Fl. Ind. Bat. 1¹ (1855) 103; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 114; Perk. Frag. Fl. Philip. (1904) 15, p. p.

Caesalpinia torquata Blanco Fl. Filip. (1837) 336.

Mezoneurum procumbens Blanco op. cit. ed. 2 (1845) 235, ed. 3, 2 (1878) 73.

Luzon (Ilocos Norte) to Mindanao. In thickets and secondary forests at low and medium altitudes. Timor.

Local names: Aráyat (Ilk.); dauag (Tag.); dauer (Ilk.); kabit-kábag (Tag.); kámit-kábag (Tag.); kámot-púsa' (Tag., Pamp.); sabít (Ig.); sagnít (Tag.); sampinít (Tag., Mbo.); sapinít (P. Bis.) sapnít (Tag., Pamp.); siít (Bis.); sokít (Yak.); tugabang (Bis.); ugabang (Bis.).

MEZONEURUM MINDORENSE Merr. in Philip. Journ. Sci. 3 (1908) Bot. 232, 5 (1910) Bot. 57.

Mindoro, Biliran, *F. B. 5383 Merritt, B. S. 18672 McGregor*. Endemic.

Var. **INERME** Merr. l. cc.

Mindoro, *B. S. 1514 Bermejos*. In thickets at low altitudes. Endemic.

Local name: Sapinít (Tag.).

MEZONEURUM PUBESCENS Desf. in Mém. Mus. Paris 4 (1818) 245, *t.* 11; F.-Vill. Novis. App. (1880) 70; Miq. Fl. Ind. Bat. 1¹ (1855) 104; Vidal Rev. Pl. Vasc. Filip. (1886) 114; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 56, Fl. Manila (1912) 230, Sp. Blancoanae (1918) 176.

Caesalpinia ignota Blanco Fl. Filip. (1837) 336, ed. 2 (1845) 235, ed. 3, 2 (1878) 72.

Luzon (Pangasinan, Pampanga, Bulacan, Rizal). In open dry grasslands, thin thickets, etc., at low altitudes. Timor.

Local names: Dauag-kalabáu (Tag.); kalambibít-lalaki (Tag.); kamit-kábag (Tag.).

MEZONEURUM SUMATRANUM (Roxb.) W. & A. Prodr. 1 (1834) 283; Miq. Fl. Ind. Bat. 1¹ (1855-59) 105, 1081; Baker in Hook. f. Fl. Brit. Ind. 2 (1878) 259; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 57.

Caesalpinia sumatrana Roxb. Hort. Beng. (1814) 32, *nomen nudum*, Fl. Ind. ed. 2, 2 (1832) 366.

Mezoneurum rubrum Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 7.

Palawan, Merrill 805. In thickets at low altitudes. Malay Peninsula, Singapore, Sumatra, Borneo.

31. PELTOPHORUM Vogel

PELTOPHORUM INERME (Roxb.) Llanos in Blanco Fl. Filip. ed. 3 (1877-83) *t.* 335; F.-Vill. Novis. App. (1880) 69 in syn.; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 57, Fl. Manila (1912) 233.

Caesalpinia inerme Roxb. Hort. Beng. (1814) 90, Fl. Ind. ed. 2, 2 (1832) 367.

Caesalpinia ferruginea Decne. in Nuov. Ann. Mus. Paris 3 (1834) 462.

Poinciana roxburghii G. Don Gen. Syst. 2 (1832) 433.

Peltophorum ferrugineum Benth. Fl. Austral. 2 (1864) 279; F.-Vill. Novis. App. (1880) 69; Vidal Phan. Cuming. Philip. (1885) 110, Rev. Pl. Vasc. Filip. (1886) 114.

Luzon (Pangasinan, Zambales, Batangas), Mindoro, Coron, Palawan, Balabac, Sibuyan, Panay, Negros. In forests along the seashore; now extensively cultivated in Manila and in other towns as a shade tree. Indo-China to the Andaman Islands through Malaya to tropical Australia.

Local names: Baringbing (Tagb., Kuy.); maganhóp-sa-katuñgá (P. Bis.); siar (Sul.).

32. ORMOSIA Jackson

ORMOSIA BASILANENSIS Merr. in Philip. Journ. Sci. 14 (1919) 407.

Basilan, F. B. 17893 Rafael, Hallier. In forests at low altitudes. Endemic.

ORMOSIA CALAVENSIS Azaola ex Blanco Fl. Filip. ed. 2 (1845) 230, ed. 3, 2 (1878) 64; F.-Vill. Novis. App. (1880) 69; Vidal Synopsis Atlas (1883) 23, *t.* 41, *f.* H, Rev. Pl. Vasc. Filip. (1886) 113, Phan. Cuming. Philip. (1885) 109; Prain in Journ. As. Soc. Beng. 69² (1900) 180; Perk. Frag. Fl. Filip. (1904) 15; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 64, Philip. Journ. Sci. 5 (1910) Bot. 58, Interpret. Herb. Amb. (1917) 262, Sp. Blancoanae (1918) 177.

Northern Luzon (Cagayan) to Mindanao. Common in primary forests at low and medium altitudes. Moluccas, Palao Islands.

Local names: Báhai (Tag., S. L. Bis., C. Bis., Bik.); bugáyong (Ilk.); gayai (Bag.); kauái (Bag.); malasága (Tag.); maribkos (Mbo.); tandang-isok (P. Bis.).

ORMOSIA CLEMENTIS Merr. in Philip. Journ. Sci. 14 (1919) 406.

Mindanao (Lanao), *Clemens 1139*. In forests, altitude about 900 m. Endemic.

ORMOSIA GRANDIFOLIA Merr. in Philip. Journ. Sci. 14 (1919) 408.

Luzon (Camarines), *F. B. 21172 Alvarez*. In forests, altitude about 100 m. Endemic.

ORMOSIA ORBICULATA Merr. in Philip. Journ. Sci. 14 (1919) 405.

Luzon (Ilocos Norte), *B. S. 32775 Ramos, 22094, 25094 Paraiso*. In forests, altitude up to 300 m. Endemic.

Local name: Panapotien (Ilk.).

ORMOSIA PANICULATA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 21, Philip. Journ. Sci. 1 (1906) Suppl. 64, 5 (1910) Bot. 58.

Luzon (Bataan), *F. B. 2028 Borden*. In forests at low altitudes. Endemic.

ORMOSIA SURIGAENSIS Merr. in Philip. Journ. Sci. 17 (1920) 263.

Mindanao (Surigao), *B. S. 34494 Ramos & Pascasio*. On forested ridges at low altitudes. Endemic.

ORMOSIA VILLAMILII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 313.

Mindanao (Zamboanga), *F. B. 21892 Villamil, 13290 Foxworthy, Villamil, & De Mesa*. In forests at low altitudes. Endemic.

Local names: Báhai (Bis.); makapilit (Bis.).

33. **SOPHORA** Linnaeus

SOPHORA LONGIPES Merr. in Philip. Journ. Sci. 12 (1917) Bot. 12.

Luzon (Batangas), Golo, *B. S. 26765 Ramos, Merrill 11556*. On slopes in an old clearing at low altitudes; on Golo in open thickets on serpentine bluffs. Endemic.

SOPHORA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 449.

Luzon (Bontoc, Benguet), *Vanoverbergh 1223, 2612, Sandkuhl 124*. In thickets on slopes, altitude 1,200 to 1,500 m. Endemic.

Local name: Dududun (Bon.).

SOPHORA TOMENTOSA Linn. Sp. Pl. (1753) 373; Miq. Fl. Ind. Bat. 1 (1855) 124; Blanco Fl. Filip. (1837) 328, ed. 2 (1845) 229, ed. 3, 2 (1878) 63; F.-Vill. Novis. App. (1880) 69; Vidal Sinopsis Atlas (1883) 23, t. 41, f. G, Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 113; Merr. in Philip. Journ. Sci. 3 (1908) 82, 409, 5 (1910) Bot. 58, Sp. Blancoanae (1918) 177.

Sophora heptaphylla Blanco Fl. Filip. (1837) 329, ed. 2 (1845) 229, ed. 3, 2 (1878) 63; F.-Vill. Novis. App. (1880) 69, non Linn.

Along the seashore throughout the Philippines; locally abundant. A pantropic strand plant.

Local names: Báñgil (Tag., Bis.); baraumárau (Tag., Bis.); gison (Tag., Bis.); golonaktau (Bag.); kabai-kábai (Tag.); kapon (Iv.); káuai (Tag., Bis.); mangguíau (Bik., Tag.); mantala (Tag., Bis.); olaomag (Bis.); pañgalañgan (Tag., Bis.); roknohan (Bis.); sandalaitan (Tag.); tambalagísa (C. Bis.); tambaléta (Tag.); tambalísa (Tag., S. L. Bis., P. Bis.); tambalísi (Tag.); tambiligísa (P. Bis.); tanbalísa (Bik.).

34. CROTALARIA Dillenius

CROTALARIA ACICULARIS Ham. in Wall. Cat. (1832) No. 5390, *nomen nudum*; Benth. in Hook. Lond. Journ. Bot. 2 (1843) 476; F.-Vill. Novis. App. (1880) 57; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 61.

Crotalaria prostrata Ceron Cat. Pl. Herb. Manila (1892) 60, non Roxb.

Luzon (Benguet, Bontoc, Rizal, Batangas), Mindanao (Lanao), Merrill 4266, 10648, Phil. Pl. 462, Williams 1419, Elmer 5826, B. S. 1838 Ramos, 37967 Ramos & Edaño. On open grassy slopes, altitude 700 to 1,400 m; on Taal Volcano occurring practically at sea level. Bengal, Ava, Tenasserim, and Java.

CROTALARIA ALBIDA Heyne ex Roth Nov. Pl. Sp. (1821) 333; F.-Vill. Novis. App. (1880) 57; Vidal Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 105; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 61.

Luzon (Cagayan to Batangas), Culion. In open grasslands at low and medium altitudes, ascending to 1,400 m. India to Formosa and the Malay Peninsula.

CROTALARIA ASSAMICA Benth. in Hook. Lond. Journ. Bot. 2 (1843) 481; F.-Vill. Novis. App. (1880) 57; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 105; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 62.

Luzon (Ilocos Norte, Abra, Pangasinan, Zambales, Bataan). Occasional in ravines, thickets, etc., at low and medium altitudes. India.

CROTALARIA BRACTEATA Roxb. Hort. Beng. (1814) 54, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 278; DC. Prodr. 2 (1825) 130; F.-Vill. Novis. App. (1880) 58; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 104; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 63, Fl. Manila (1912) 252.

Luzon (Benguet, Pangasinan, Rizal). Occasional in thickets, on open banks, etc., at low and medium altitudes. India to Malaya.

CROTALARIA CALYCINA Schrank Pl. Rar. Monac. (1819) t. 12; DC. Prodr. 2 (1825) 129; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 390; Miq. Fl. Ind. Bat. 1² (1855) 337; F.-Vill. Novis. App. (1880) 57; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 105; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 60.

Northern Luzon to Mindanao. In open grasslands at low and medium altitudes. Tropical Asia, Africa, Malaya, and northern Australia.

Local name: Balahibong-usá (Tag.).

CROTALARIA CHINENSIS Linn. Syst. ed. 10 (1759) 1158; Benth. in Hook. Lond. Journ. Bot. 2 (1843) 566; F.-Vill. Novis. App. (1880) 57; Vidal Phan. Cuming. Philip. (1885) 107.

Luzon (Rizal), Negros, Mindanao (Misamis), *Merrill Phil. Pl. 449, 2004, F. B. 19509 Tarrosa*. In open grasslands at low altitudes, very local. Eastern India to southern China and Malaya.

CROTALARIA FERRUGINEA Grah. in Wall. Cat. (1832) No. 5398; Benth. in Hook. Lond. Journ. Bot. 2 (1843) 476; F.-Vill. Novis. App. (1880) 57; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Philip. (1886) 105; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 61.

Luzon (Cagayan, Ilocos Norte, Bontoc, Benguet, Ifugao, Zambales, Rizal), Mindanao (Bukidnon, Misamis, Lanao, Cotabato, Davao). In open grasslands at low and medium altitudes, in Benguet ascending to 2,000 m. India to China and Formosa south to Malaya.

Local names: Púgad-labúyo (Tag.); talinotino (Buk.).

CROTALARIA INCANA Linn. Sp. Pl. (1753) 716; DC. Prodr. 2 (1825) 132; Miq. Fl. Ind. Bat. 1^a (1855) 347; F.-Vill. Novis. App. (1880) 58; Vidal Rev. Pl. Vasc. Philip. (1886) 104; Naves in Blanco Fl. Filip. (1877-83) t. 160; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 63, Fl. Manila (1912) 252.

Crotalaria radiata Merr. in Philip. Journ. Sci. 5 (1910) Bot. 63.

Babuyan Islands and Luzon (Cagayan to Sorsogon), Mindoro. In waste places in and about towns, locally abundant. A pantropic weed of American origin. *Crotalaria radiata* Merr. is a form with abnormal flowers due to the attack of fungi or insects.

Local names: Búlailáua (Tag.); putok-putókan (Tag.).

CROTALARIA JUNCEA Linn. Sp. Pl. (1753) 714; DC. Prodr. 2 (1825) 125; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 62, Fl. Manila (1912) 251.

Luzon, occasionally cultivated experimentally, apparently naturalized in Ilocos Norte. Sunn hemp, introduced from India.

CROTALARIA LINIFOLIA Linn. f. Suppl. (1781) 322; DC. Prodr. 2 (1825) 128; Blanco Fl. Filip. (1837) 570; F.-Vill. Novis. App. (1880) 57; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Philip. (1886) 104; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 60, Fl. Manila (1912) 241, Sp. Blancoanae (1918) 178.

Crotalaria pallida Blanco Fl. Filip. (1837) 570, non Ait.

Crotalaria stenophylla Vog. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 7; Benth. in Hook. Lond. Journ. Bot. 2 (1843) 568.

Quirosia secunda Blanco Fl. Filip. ed. 2 (1845) 398, ed. 3, 2 (1879) 366, t. 268.

Crotalaria pumila Blanco Fl. Filip. ed. 2 (1845) 397, ed. 3, 2 (1879) 365, non Schrank.

Crotalaria formosana Mats. in Journ. Coll. Sci. Univ. Tokyo 12 (1900) 395; Mats. & Hayata op. cit. 22 (1906) 103, t. 10.

Luzon (Cagayan to Tayabas), Negros, Mindanao. In open grasslands at low and medium altitudes, in Benguet ascending to 1,400 m. India to southern China and Formosa southward through Malaya to Australia and the Caroline Islands.

Local name: Gurung-gúrung (Bis.).

CROTALARIA ORIXENSIS Willd. in Ges. Naturf. Fr. Neue Schr. 4 (1803) 217; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 83; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 18.

Luzon (Manila), *B. S. 19145 Guerrero*. Apparently a casual introduction which will perhaps not persist. India, Abyssinia, tropical Africa.

CROTALARIA QUINQUEFOLIA Linn. Sp. Pl. (1753) 716; Blanco Fl. Filip. (1837) 569; ed. 2 (1845) 397, ed. 3, 2 (1879) 365, *t. 159*; Vog. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 9; F.-Vill. Novis. App. (1880) 58; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 104; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 64, Fl. Manila (1912) 252, Sp. Blancoanae (1918) 177.

Northern Luzon to Mindanao, widely distributed and locally abundant in open wet lands, rice paddies, etc., at low and medium altitudes. India through Malaya to Australia.

Local names: Búli-láua (Tag.); katánda (Tag.); palpaltóg (Ilk.); putúkan (Tag.); susoi (Tag.); suso-susóyan (Tag.).

CROTALARIA RETUSA Linn. Sp. Pl. (1753) 715; DC. Prodr. 2 (1825) 125; Miq. Fl. Ind. Bat. 1¹ (1855) 330; F.-Vill. Novis. App. (1880) 57; Perk. Frag. Fl. Philip. (1904) 16; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 62.

Northern Luzon to Mindanao. In open usually damp places in the settled areas at low and medium altitudes. Pantropic.

Local names: Búli-láua (Tag.); kalog-kalog (P. Bis.); Kataua (Sub.); palpaltóg (Ilk.); potókan (Tag.).

CROTALARIA SALTIANA Andr. Bot. Rep. (1811) *t. 648*; Prain ex King in Journ. As. Soc. Beng. 66² (1897) 41, 353; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 62.

Crotalaria striata DC. Prodr. 2 (1825) 131; Miq. Fl. Ind. Bat. 1¹ (1855) 346; Perk. Frag. Fl. Philip. (1904) 16.

Luzon (Bontoc), Panay, Negros. Common in waste places in and about towns, manifestly introduced. Pantropic.

Local names: Gorung-görung (P. Bis.); kolong-kolong (P. Bis.); tamba-rísa (P. Bis.).

CROTALARIA SESSILIFLORA Linn. Sp. Pl. ed. 2 (1763) 1004; Benth. in Hook. Lond. Journ. Bot. 2 (1843) 565; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 390; F.-Vill. Novis. App. (1880) 57; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 105; Merr. Philip. Journ. Sci. 3 (1908) Bot. 81, 5 (1910) Bot. 105.

Luzon (Cagayan to Sorsogon), Mindanao (Bukidnon). Occasional in open grasslands at low and medium altitudes, in Bontoc ascending to 1,300 m. India to Japan southward to Malaya.

Local name: Pitpitít (Bon.).

CROTALARIA TRIFOLIASTRUM Willd. Sp. Pl. 3 (1806) 983; Merr. in Philip. Journ. Sci. 13 (1918) Bot. 17.

Luzon (Ilocos Norte), *B. S. 27265, 32691 Ramos*. In open places at low altitudes. India to tropical Australia.

CROTALARIA VERRUCOSA Linn. Sp. Pl. (1753) 718, Miq. Fl. Ind. Bat. 1¹ (1855) 331; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 390; F.-Vill. Novis. App. (1880) 57; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 104; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 80, 5 (1910) Bot. 62, Fl. Manila (1912) 251, Sp. Blancoanae (1918) 177.

Phaseolus bulai Blanco Fl. Filip. (1837) 572.

Quirosia anceps Blanco Fl. Filip. ed. 2 (1845) 398, ed. 3, 2 (1879) 367.

Luzon (Bataan, Laguna, Tayabas, Rizal), Mindoro, Masbate, Negros, Cebu, Mindanao. In open places at low altitudes. Pantropic.

Local names: Búlailáua (Tag.); gulínggam (Sul.); gulung-gúlung (P. Bis.); kalayákai (Tag.); reging (Bag.).

EXCLUDED SPECIES

CROTALARIA LABURNIFOLIA Retz.; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 84; F.-Vill. Novis. App. (1880) 58.

Baker's record of this species as Philippine was probably based on an erroneously localized *Cuming* specimen.

CROTALARIA SERICEA Retz.; F.-Vill. Novis. App. (1880) 57.

35. **MEDICAGO** Linnaeus

MEDICAGO DENTICULATA Willd. Sp. Pl. 3 (1803) 1414; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 90; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 64.

Luzon (Benguet, Union, Manila). A casual introduction at low altitudes, apparently well established in Benguet. Europe to India, China, and Japan, naturalized in North America.

Local name: Galéria (Ilk.).

MEDICAGO LUPULINA Linn. Sp. Pl. (1753) 779; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 274, Fl. Manila (1912) 253.

Luzon (Benguet), *Merrill 7762*. In open grassy places, altitude about 1,500 m, introduced. Widely distributed in Europe and Asia, naturalized in North America.

36. **MELILOTUS** Tournefort

MELILOTUS INDICA (Linn.) All. Fl. Ped. 1 (1785) 308; Merr. in Philip. Journ. Sci. 10 (1915) Bot. 15.

Trifolium melilotus-indica Linn. Sp. Pl. (1753) 765.

Luzon (Benguet), *Merrill 9700*. An introduced weed. Widely distributed in Asia, introduced in other regions.

37. **INDIGOFERA** Linnaeus

INDIGOFERA GALEGOIDES DC. Prodr. 2 (1825) 225; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 100.

Culion, *B. S. 41327 Ramos*. In open grasslands (cogonales), at low altitudes. India and Ceylon to Indo-China, southern China, the Malay Peninsula, and Java.

INDIGOFERA HENDECAPHYLLA Jacq. Coll. 2 (1788) 259; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 98; Craib. in Notes Bot. Gard. Edinb. 8 (1913) 68; Merr. in Philip. Journ. Sci. 14 (1919) 405.

Indigofera pusilla Lam. Encycl. 3 (1789) 248.

Luzon (Ilocos Norte), *B. S.* 32770 Ramos. In open dry grassy places at low altitudes. India to southeastern China, tropical and southern Africa.

INDIGOFERA HIRSUTA Linn. Sp. Pl. (1753) 751; DC. Prodr. 2 (1825) 228; Miq. Fl. Ind. Bat. 1¹ (1855) 304; F.-Vill. Novis. App. (1880) 58; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 105; Perk. Frag. Fl. Philip. (1904) 16; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 66, Fl. Manila (1912) 243, Sp. Blancoanae (1918) 179.

Indigofera angustifolia Blanco Fl. Filip. (1837) 596, ed. 2 (1845) 415, ed. 3, 2 (1879) 394, non Linn.

Indigofera tinctoria Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 163, non Linn.

Northern Luzon to Mindanao. In waste places in and about towns, an introduced weed. Pantropic.

Local names: Taiúman (Tag.); taium-taiúman (Tag.).

INDIGOFERA LINIFOLIA Retz. Obs. 4 (1786) 29, 6 (1791) 33, t. 2; DC. Prodr. 2 (1825) 222; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 92; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 195, 5 (1910) Bot. 65.

Sphaeridiophorum linifolium Desv. Journ. Bot. 3 (1813) 125, t. 6, f. 35.

Luzon (Ilocos Norte, Benguet, Nueva Ecija), *Merrill 4387, B. S. 32734, 32758 Ramos, 26247 Ramos & Edaño, F. B. 15506 Merritt & Darling*. On dry rocky and grassy banks and slopes at low and medium altitudes. Abyssinia to China through Malaya to Australia.

INDIGOFERA NIGRESCENS Kurz ex Prain in Journ. As. Soc. Beng. 67² (1898) 268; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 183; Merr. op. cit. 5 (1910) Bot. 67, 353.

Luzon (Bontoc, Benguet), *B. S. 32007 Santos, 4396, 4456 Mearns, 40431 Ramos & Edaño, Elmer 6582, Williams 925, 1413, Merrill 6395*. On open slopes in the pine region, altitude 1,300 to 2,200 m. India, Yunnan.

Local name: Yakyákan (Ig.).

INDIGOFERA SUFFRUTICOSA Mill. Gard. Dict. ed. 8 (1768) No. 2; Prain & Baker in Journ. Bot. 40 (1902) 137, 138 sub *I. anil* Linn.; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 67, Fl. Manila (1912) 243, Sp. Blancoanae (1918) 179.

Indigofera anil Linn. Mant. 2 (1771) 272; DC. Prodr. 2 (1825) 225; Miq. Fl. Ind. Bat. 1¹ (1855) 307; F.-Vill. Novis. App. (1880) 58; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 105; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 410.

Indigofera argentea Blanco Fl. Filip. ed. 2 (1845) 415, in nota, ed. 3, 2 (1879) 394, in nota, non Linn.

Batan Islands and northern Luzon to Mindanao. In waste places in and about towns, locally abundant; occasionally cultivated. Indigo. Pantropic.

Local names: Páuai (Iv.); tágum (S. L. Bis.); tágun (P. Bis.); táyom (Ilk.); táyon (Ilk.); táyum (Ilk., Tag., P. Bis., C. Bis.); tina-tináan (Tag.); yagum (Bis.).

INDIGOFERA TINCTORIA Linn. Sp. Pl. (1753) 751; DC. Prodr. 2 (1825) 224; Blanco Fl. Filip. (1837) 591, ed. 2 (1845) 413, ed. 3, 2 (1879) 393, Miq. Fl. Ind. Bat. 1¹ (1855) 206; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 403; F.-Vill. Novis. App. (1880) 58; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 105; Perk. Frag. Fl. Philip. (1904) 16; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 81, 410, 5 (1910) Bot. 67, Fl. Manila (1912) 244, Sp. Blancoanae (1918) 179.

Batan Islands and northern Luzon to Mindanao, in waste places in and about towns at low and medium altitudes; sometimes cultivated. Indigo. Pantropic.

Local names: Añil (Sp.); dágum (Sub.); tagung-tágung (C. Bis.); tágam (Bis.); táiom (Ilk.); taióng-taiúñgan (Bik.); taium (Iv.); tálung (Pamp.); túgum (Bik.).

INDIGOFERA TRIFOLIATA Linn. Amoen. Acad. 4 (1759) 327, Sp. Pl. ed. 2 (1763) 1062; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 96; F.-Vill. Novis. App. (1880) 58; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 106, Philip. Journ. Sci. 3 (1908) Bot. 411, 5 (1910) Bot. 66.

Batan Islands, Luzon (Cagayan, Ilocos Norte, Bontoc, Pangasinan, Rizal), Mindanao (Bukidnon), *B. S. 27541 Ramos, 38469 Ramos & Edaño, 17742 Otanes, 26056 Félix*. On open dry grassy slopes at low and medium altitudes. India to China southward to Australia.

INDIGOFERA UNIFOLIOLATA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 65, Sp. Blancoanae (1918) 178.

Tetragonolobus simplicifolius Blanco Fl. Filip. ed. 2 (1845) 397, ed. 3, 2 (1879) 364; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 38, non *Indigofera simplicifolia* Lam.

Luzon (Bulacan, Rizal, Laguna), *B. S. 1411, 14944, 21678, 21718 Ramos, Merrill Sp. Blancoanae 965*. In grasslands at low altitudes. Endemic.

INDIGOFERA ZOLLINGERIANA Miq. Fl. Ind. Bat. 1¹ (1855) 310; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 66.

Indigofera teysmanni Miq. Fl. Ind. Bat. 1² (1858) 1083; Prain & Baker in Journ. Bot. 40 (1902) 143; Perk. Frag. Fl. Philip. (1904) 16; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 24, Philip. Journ. Sci. 3 (1908) Bot. 411.

Indigofera galeoides F.-Vill. Novis. App. (1880) 59; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 105, non DC.

Batan Islands and northern Luzon to Mindanao and Palawan. In thickets, secondary forests, etc., at low and medium altitudes, ascending to 1,400 m in Benguet. Southern China and Formosa, Indo-China, Malay Peninsula, through Malaya to New Caledonia.

Local names: Balabalatuñgan (Bik.); balabalátong (Tag.); vanatnid (Iv.); tina-tináan (Tag.).

38. PSORALEA Linnaeus

PSORALEA BADCANA Blanco Fl. Filip. ed. 2 (1845) 416, ed. 3, 2 (1879) 395; F.-Vill. Novis. App. (1880) 58; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 105; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 68, Sp. Blancoanae (1918) 180.

Liparia badocanu Blanco Fl. Filip. (1837) 597; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 37.

Meladenia densiflora Turcz. in Bull. Soc. Nat. Mosc. 21¹ (1848) 576.

Luzon (Ilocos Norte, Abra, Bontoc, Union, Pangasinan), *Cuming 1149*, *Merrill Sp. Blancoanae 968*, *B. S. 4907, 7011, 7240, 27298 Ramos*. In open grasslands, waste places, etc., at low and medium altitudes. New Guinea

Local names: Lín̄gai (Ilk.); lolóng (Ilk.).

39. PAROSELA Cavanilles

PAROSELA GLANDULOSA (Blanco) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 68, Fl. Manila (1912) 246; Sp. Blancoanae (1918) 180.

Amorpha glandulosa Blanco Fl. Filip. (1837) 555.

Dalea alopecuroides Blanco Fl. Filip. ed. 2 (1845) 389, ed. 3, 2 (1879) 351; F.-Vill. Novis. App. (1880) 58, non Willd.

Dalea nigra Mart. & Gal. in Bull. Acad. Brux. 10² (1843) 43; Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 309; Vidal Phan. Cuming. Philip. (1885) 107, Phan. Cuming. Philip. (1886) 105; Perk. Frag. Fl. Philip. (1904) 16.

Dalea glandulosa Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 37, Philip. Journ. Sci. 1 (1906) Suppl. 64.

Parosela nigra Rose in Contr. U. S. Nat. Herb. 10 (1906) 105.

Luzon (Ilocos Norte to Batangas). On open dry slopes at low and medium altitudes, ascending to 1,300 m; locally very abundant. Introduced from Mexico.

Local names: Agógo (Tag.); cháng-párang (Tag.); dura (Pang.); dúrang-párang (Tag.); kamañgi (Tag.); sampálok-sampalókan (Tag.).

40. TEPHROSIA Persoon

TEPHROSIA DICHOTOMA Desv. in Ann. Sci. Nat. I 9 (1826) 415; Miq. Fl. Ind. Bat. 1¹ (1855) 298; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 69, Fl. Manila (1912) 244, Sp. Blancoanae (1918) 180.

Tephrosia luzoniensis Vogel in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 15; Miq. Fl. Ind. Bat. 1¹ (1855) 299; F.-Vill. Novis. App. (1880) 59; Perk. Frag. Fl. Philip. (1904) 17.

Indigofera hirsuta Blanco Fl. Filip. (1837) 591, non Linn.

Indigofera senegalensis Blanco op. cit. ed. 2 (1845) 412, ed. 3, 2 (1879) 392, t. 162, non Linn.

Tephrosia piscatoria A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 407, quoad pl. Philip. non Pers.

Northern Luzon to Mindanao. In open dry places at low and medium altitudes. Endemic.

Local names: Balabatong (Buk.); dagangdáng (Bis.); maásik (Pamp.); marakatú dai (Ilk.); tayom-tayóman (Tag.).

TEPHROSIA HOOKERIANA W. & A. Prodr. (1834) 212; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 113.

Jolo, *Link* 174. In waste places, certainly introduced. India to Singapore and Java.

TEPHROSIA OBOVATA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 69.

Palau, Luzon (Ilocos Norte), Lubang, *F. B.* 16939 *Curran*, *B. S.* 27681, 27112 *Ramos*, 2341 *Mearns*. In dry open places at low altitudes. Endemic.

Local name: Karkardís (Ibn.).

TEPHROSIA PURPUREA (Linn.) Pers. Syn. 2 (1807) 329; Miq. Fl. Ind.

Bat. 1^a (1855) 296; Rolfe in Journ. Bot. 23 (1885) 212; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 106; Perk. Frag. Fl. Philip. (1904) 17; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 69.

Cracca purpurea Linn. Sp. Pl. (1753) 752.

Luzon (Cavite, Batangas), Mindanao (Bukidnon, Misamis), *B. S.* 1315 *Mangubat*, 22364 *Ramos*, 21397 *Escritor*, *Piper* 147. In open grasslands or waste places at low altitudes. India to southern China through Malaya to tropical Australia.

Local names: Balbalátong (Tag.); tina-tináan (Tag.).

TEPHROSIA VESTITA Vogel in Nov. Act. Acad. Nat. Cur. 19 (1843)

Suppl. 1: 15; Rolfe in Journ. Bot. 23 (1885) 212; Vidal Phan. Cuming Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 106; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 69.

Negros, Mindanao (Bukidnon, Misamis, Lanao), *Cuming* 1621, *Clemens*, *F. B.* 15194 *Tarrosa*, 21456 *Escritor*. In thickets at low and medium altitudes. Southern China to Java and New Guinea.

Local name: Tágum (P. Bis.).

DOUBTFUL SPECIES

TEPHROSIA CAPITULATA Link Enum. Hort. Berol. 2 (1822) 251; Vogel in

Linnaea 10 (1836) 587.

Link states that the type was from Hawaii, but Vogel states that Chamisso's specimen was from Luzon.

TEPHROSIA CANDIDA (Roxb.) DC.

A recent introduction in cultivation at Los Baños.

41. MILLETTIA Wight and Arnott

MILLETTIA AHERNII Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot.

103; Merr. op. cit. 5 (1910) Bot. 71; Dunn in Journ. Linn. Soc. Bot. 41 (1912) 181.

Luzon (Cagayan, Ilocos Sur, Rizal, Tayabas), *F. B.* 3373 *Ahern's* collector, 5655 *Klemme*, 23270 *Velasco*, *B. S.* 20884 *Escritor*. In open forests at low altitudes. Endemic.

Local names: Balok (Tag.); balok-balok (Tag.); baní (Ilk.).

MILLETTIA BRACHYCARPA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 17.

Luzon (Batangas), Palawan, *Elmer* 13035, *Merrill* 9578, *B. S.* 22382 *Ramos*, *F. B.* 21602 *Agama*. In thin forests, deserted clearings, etc., at low altitudes. Endemic.

MILLETTIA CANARIIFOLIA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 71; Dunn in Journ. Linn. Soc. Bot. 41 (1912) 178.

Luzon (Zambales), *B. S. 4711, 7427 Ramos*. In thickets or secondary forests at low altitudes. Endemic.

Local name: Malapatpát (Tag.).

MILLETTIA CAVITENSIS Merr. in Philip. Journ. Sci. 5 (1910) Bot. 72; Dunn in Journ. Linn. Soc. Bot. 41 (1912) 179.

Luzon (Ilocos Norte, Cavite), *Merrill 4181, F. B. 13815 Merritt & Darling*. In thickets and ravines at low altitudes. Endemic.

Local name: Mila-milan (Ilk.).

MILLETTIA FOXWORTHYI Merr. in Philip. Journ. Sci. 5 (1910) Bot. 72; Dunn in Journ. Linn. Soc. Bot. 41 (1912) 179.

Palawan, *B. S. 740 Foxworthy*. On river banks, altitude about 250 m. Endemic.

MILLETTIA LITORALIS Dunn in Philip. Journ. Sci. 6 (1911) Bot. 316, Journ. Linn. Soc. Bot. 41 (1912) 181.

Mindanao (Davao), *De Vore & Hoover 250*. Along sandy seashores. Endemic.

MILLETTIA LONGIPES Perk. Frag. Fl. Philip. (1904) 80; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 71; Dunn in Journ. Linn. Soc. Bot. 41 (1912) 178.

Millettia capillipes Dunn in Philip. Journ. Sci. 6 (1911) Bot. 316, Journ. Linn. Soc. Bot. 41 (1912) 180.

Luzon (Isabela, Cagayan), *Warburg 12112, 12094, 12095, F. B. 18549 Alvarez, Adduri 181*. In thickets or forests along streams at low altitudes. Endemic.

MILLETTIA MERRILLII Perk. Frag. Fl. Philip. (1904) 81; Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 18, Philip. Journ. Sci. 1 (1906) Suppl. 64, 5 (1910) Bot. 71, Fl. Manila (1912) 245; Dunn in Journ. Linn. Soc. Bot. 41 (1912) 180.

Millettia xylocarpa Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 79; Vidal Sinopsis Atlas (1883) t. 41, f. B, non Miq.

Millettia caerulea F.-Vill. Novis. App. (1880) 59, non Baker.

Luzon (Cagayan to Bataan and Rizal), Mindoro, Negros. In thickets and secondary forests at low and medium altitudes; locally abundant. Endemic.

Local names: Balók (Tag.); balok-balók (Tag.); baní (Ilk., Pamp.); malabai (Pamp.); pañgardisen (Ilk.).

MILLETTIA PLATYPHYLLA Merr. ex Dunn in Journ. Linn. Soc. Bot. 41 (1912) 140.

Samar, Biliran, Leyte, Mindanao (Agusan, Bukidnon, Misamis). In thickets and secondary forests at low and medium altitudes. Endemic.

Local names: Dulis (C. Bis.); malatayotes (S. L. Bis.).

MILLETTIA RACEMOSA (Roxb.) Benth. in Miq. Pl. Jungh. (1852) 249; Dunn in Journ. Linn. Soc. Bot. 41 (1912) 164.

Robinia racemosa Roxb. Fl. Ind. ed. 2, 3 (1832) 329.

Pongamia racemosa Grah. in Wall. Cat. (1832) No. 5914.

Luzon (Rizal), *B. S. 1064 Ramos*. In forests at low or medium altitudes. India to Burma and Siam. The identity of the Luzon specimen with this species is not certain, as it is with buds only.

MILLETTIA STIPULATA Dunn in Philip. Journ. Sci. 6 (1911) Bot. 316, Journ. Linn. Soc. Bot. 41 (1912) 181.

Luzon (Bulacan), *F. B. 11140 Aguilar*. In thickets or forests at low altitudes. Endemic.

EXCLUDED SPECIES

MILLETTIA PULCHRA Benth.; Baker in Hooker f. Fl. Brit. Ind. 2 (1876) 105; F.-Vill. Novis. App. (1880) 59.

Baker's record of this species as a Philippine one was probably based on an erroneously localized specimen.

MILLETTIA SERICEA W. & A.; F.-Vill. l. c.

MILLETTIA SPLENDENS W. & A.; F.-Vill. l. c.

42. *WHITFORDIODENDRON* Elmer

(*Whitfordia* Elm., non Murr., *Adinobotrys* Dunn)

WHITFORDIODENDRON SCANDENS Elm. ex Dunn in Kew Bull. (1912) 364 in syn.

Whitfordia scandens Elm. Leaf. Philip. Bot. 2 (1910) 689.

Adinobotrys scandens Dunn in Kew Bull. (1912) 364.

Sibuyan, Panay, Palawan, Mindanao (Bukidnon, Agusan), *Elmer 12259, 13288, 13134, 12747, F. B. 22882 Tamesis, B. S. 31148 Ramos & Edaño, 15756 Fénix*. In forests at low and medium altitudes. Endemic.

Local names: Kagai (P. Bis.); pitugo (Buk.); tolanan (Mbo.).

The genus has several other species in the Malayan region. By common consent among mycologists Murrill's genus *Whitfordia* is reduced to *Trametes* as a synonym, which, among many systematists, would allow the reinstatement of Elmer's original name *Whitfordia* for the present genus.

43. *GLIRICIDIA* Humbolt, Bonpland, and Kunth

GLIRICIDIA SEPIUM (Jacq.) Steud. Nomencl. (1821) 688; Urban Symbol. Antill. 2 (1900) 288; Perk. Frag. Fl. Philip. (1904) 17; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 64, 5 (1910) Bot. 73, Fl. Manila (1912) 245, Sp. Blancoanae (1918) 180.

Robinia sepium Jacq. Enum. (1760) 28.

Gliricidia maculata HBK Nov. Gen. 6 (1824) 393, F.-Vill. Novis. App. (1880) 59; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 22, Govt. Lab. Publ. (Philip.) 6 (1904) 30.

Galedupa pungam Blanco Fl. Filip. (1837) 558, ed. 2 (1845) 390, ed. 3, 2 (1879) 352, t. 250, non Gmel.

Millettia ? luzoniensis A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 456; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 82; Dunn in Journ. Linn. Soc. Bot. 41 (1912) 239.

Millettia splendidissima Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 250; Vidal Cat. Pl. Prov. Manila (1880) 25, non Blume.

Throughout the Philippines in the settled areas at low and medium altitudes, thoroughly naturalized; often planted in hedges. Introduced from Mexico by the Spaniards, its common name *kakauati* of Aztec origin.

Local names: Kakaoáti (Bon.); kakauáti (Tag.); madre cacáo (Sp.); marikakáu (Tag.); mandiri-kakáu (Sul.).

44. *SESBANIA* Scopoli

SESBANIA CANNABINA (Retz.) Pers. Syn. 2 (1807) 316; DC. Prodr. 2 (1825) 265; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 74, Fl. Manila (1912) 250.

Aeschynomene cannabina Retz. Obs. 5 (1789) 26.

Agati cannabina Desv. Journ. Bot. 1 (1813) 120.

Sesbania aegyptiaca F.-Vill. Novis. App. (1880) 59; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 405, non Poir.

Sesbania aculeata F.-Vill. Novis. App. (1880) 59; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 106; Perk. Frag. Fl. Philip. (1904) 17, non Pers.

Sesbania picta Vidal Cat. Pl. Prov. Manila (1880) 26, non Pers.

Northern Luzon to Mindanao. Along streams, in open wet lands, etc., at low and medium altitudes. India to Malaya.

Local names: Balakbák (Tag.); bayakbák-búkit (Pamp.); ganai (C. Bis.); laguiaua (Bag.); rubáu (Ilk.); tabing (Mag.).

SESBANIA GRANDIFLORA (Linn.) Pers. Syn. 2 (1807) 316; Blanco Fl. Filip. (1837) 599, ed. 2 (1845) 418, ed. 3, 2 (1879) 399, t. 291; F.-Vill. Novis. App. (1880) 60; Vidal Sinopsis Atlas (1883) 23, t. 40, f. F; Perk. Frag. Fl. Philip. (1904) 17; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 75, Fl. Manila (1912) 250, Sp. Blancoanae (1918) 181.

Robinia grandiflora Linn. Sp. Pl. (1753) 722.

Aeschynomene grandiflora Linn. op. cit. ed. 2 (1763) 1060.

Sesban grandiflorus Poir. in Lam. Encycl. 7 (1806) 127.

Agati grandiflora Desv. Journ. Bot. 1 (1813) 120, t. 4, f. 6; DC. Prodr. 2 (1825) 266; Miq. Fl. Ind. Bat. 1¹ (1855) 289.

Northern Luzon to Mindanao in the settled areas at low and medium altitudes, often planted; certainly an introduced plant in the Philippines. India to the Mascarene Islands, through Malaya to tropical Australia, planted in other tropical countries.

Local names: Diana (Bag.); gauai-gáuai (P. Bis.); kambang-turi (Sul.); katódai (Ilk.); katúdai (Ilk., Ibn.); katúrai (Ibn., Tag., Pang.).

SESBANIA ROXBURGHII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 269, 5 (1910) Bot. 74, Sp. Blancoanae (1918) 181.

Aeschynomene paludosa Roxb. Fl. Ind. ed. 2, 3 (1832) 333, non *Sesbania paludosa* Jacq.

Coronila emerus Blanco Fl. Filip. (1837) 582, non Linn.

Sesbania cannabina Blanco op. cit. ed. 2 (1845) 418, ed. 3, 2 (1879) 400, non Poir.

Sesbania grandiflora Miq. Fl. Ind. Bat. 1¹ (1855) 288, non Pers.

Sesbania paludosa Prain in Journ. As. Soc. Beng. 66² (1897) 82, 367, non Jacq.

Sesbania aculeata Poir. var. *paludosa* Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 115; F.-Vill. Novis. App. (1880) 59.

Luzon (Rizal, Laguna), *B. S.* 6530 Robinson, 22424 Ramos, 1187 Robinson & Ramos, Merrill Phil. Pl. 450, *Sp. Blancoanae* 880, *F. B.* 10098 Curran. Along streams, in swamps, and in shallow water of lakes. India to southern China and Formosa southward to Java and Celebes.

Local name: Balakbák (Tag.).

SESBANIA SESBAN (Linn.) Merr. in Philip. Journ. Sci. 7 (1912) Bot. 235.

Aeschynomene sesban Linn. Sp. Pl. (1753) 714.

Coronila sesban Willd. Sp. Pl. 3 (1806) 1147.

Sesbania aegyptiaca Poir. in Lam. Encycl. 7 (1806) 128.

Emerus sesban O. Kuntze Rev. Gen. Pl. (1891) 180.

Luzon (Manila), *Shaw* 801, *Merrill* 9805, occasional; a recent introduction. Tropics of both hemispheres.

45. CLIANTHUS Banks and Solander

CLIANTHUS BINNENDYCKIANUS Kurz in Journ. As. Soc. Beng. 40² (1871) 51; Perk. Frag. Fl. Philip. (1904) 20; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 75; C. B. Rob. op. cit. 6 (1911) Bot. 205.

Polillo, Luzon (Sorsogon), Leyte, Camiguin de Misamis, Mindanao, *Elmer* 10962, 13307, 16645, *Warburg* 14663, *Wenzel* 814, 913, *Williams* 2745, *B. S.* 10767 *McGregor*, 15212, 14714 *Ramos*, *Clemens* 623. In thickets and forests at low and medium altitudes. Celebes, Ceram.

Local name: Sabali (Bag.).

46. ORMOCARPUM Beauvois

ORMOCARPUM COCHINCHINENSE (Lour.) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 76.

Diphaca cochinchinensis Lour. Fl. Cochinch. (1790) 454.

Hedysarum senoides Willd. Sp. Pl. 3 (1803) 1207.

Ormocarpum senoides DC. Prodr. 2 (1825) 315; F.-Vill. Novis. App. (1880) 60; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 106; Perk. Frag. Fl. Philip. (1904) 17.

Luzon (Ilocos Norte, Ilocos Sur, Batangas, Camarines), Cagayan de Misamis, *B. S.* 14454, 22381 *Ramos*, *F. B.* 13956 *Merritt & Darling*, 5631 *Klemme*. On dry open slopes and in thickets at low and medium altitudes; rare or local. Tropical Africa, India to southern China through Malaya to tropical Australia.

47. AESCHYNOMENE Linnaeus

AESCHYNOMENE INDICA Linn. Sp. Pl. (1753) 715; Miq. Fl. Ind. Bat. 1¹ (1855) 274; F.-Vill. Novis. App. (1880) 60; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 106; Perk. Frag. Fl. Philip. (1904) 18; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 76, Fl. Manila (1912) 237, *Sp. Blancoanae* (1918) 181.

Aeschynomene aspera Vogel in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 26, non Linn.

Aeschynomene roxburghii Spreng. Syst. 3 (1826) 322; Llanos Frag. Pl. Filip. (1851) 83; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 64.

Throughout the Philippines, in open wet places, old rice paddies, etc., at low and medium altitudes. Tropics of the Old World.

48. SMITHIA Aiton

SMITHIA CILIATA Royle Illustr. (1839) 201, *t.* 35, *f.* 2; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 150; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 184; Merr. op. cit. 5 (1910) Bot. 77.

Damapana ciliata O. Kuntze Rev. Gen. Pl. (1891) 179.

Luzon (Bontoc, Benguet), *Vanoverbergh 842, Merrill 4267, Williams 970, B. S. 5890 Ramos, 31928 Santos, 2502 Mearns*. On open slopes in the pine region, altitude 1,100 to 2,200 m. India to Formosa.

SMITHIA SENSITIVA Ait. Hort. Kew. 3 (1789) 496; DC. Prodr. 2 (1825) 323; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 148; Miq. Fl. Ind. Bat. 1¹ (1855) 272; Ceron Cat. Pl. Herb. Manila (1892) 61; Perk. Frag. Fl. Philip. (1904) 18; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 76.

Damapana ciliata O. Kuntze Rev. Gen. Pl. (1891) 179.

Luzon (Benguet, Bontoc, Nueva Ecija, Nueva Vizcaya, Pangasinan), Mindanao (Lanao). In open wet places, chiefly at medium altitudes, ascending to 2,000 m. Tropical Asia and Africa to Formosa, Malaya, and Tropical Australia.

Local names: Bargak (Ig.); gomgóm (If.).

49. ARACHIS Linnaeus

ARACHIS HYPOGAEA Linn. Sp. Pl. (1753) 741; Blanco Fl. Filip. (1837) 567, ed. 2 (1845) 396, ed. 3, 2 (1878) 363, *t.* 157; Miq. Fl. Ind. Bat. 1¹ (1855) 281; F.-Vill. Novis. App. (1880) 60; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 77, Fl. Manila (1912) 237, Sp. Blancoanae (1918) 182.

The peanut, cultivated in many parts of the Philippines, an early introduction from tropical America.

Local names: Batung-china (Sul.); maní (Sp.).

50. ZORNIA J. F. Gmelin

ZORNIA DIPHYLLA (Linn.) Pers. Syn. 2 (1807) 318; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 147; F.-Vill. Novis. App. (1880) 60; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 106; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 77, Fl. Manila (1912) 238, Sp. Blancoanae (1918) 182.

Hedysarum diphyllum Linn. Sp. Pl. (1753) 747.

Zornia zeylonensis Pers. Syn. 2 (1807) 318; DC. Prodr. 2 (1825) 317.

Zornia nuda Vogel in Linnaea 10 (1836) 587.

Lupinus angustifolius Blanco Fl. Filip. (1837) 566, non Linn.

Smithia bigeminata Blanco op. cit. ed. 2 (1845) 395 (*rigeminata*), ed. 3, 2 (1879) 362.

Northern to central Luzon (Cagayan to Rizal and Bataan). In open dry grasslands in the settled areas at low and medium altitudes, with all the appearance of an introduced species. Pantropic.

51. DESMODIUM Desvaux

DESMODIUM AURICULATUM DC. Prodr. 3 (1827) 326; Prain in Journ. As. Soc. Bengal 66² (1897) 144.

Pteroloma auriculatum Miq. Fl. Ind. Bat. 1¹ (1855) 258.

Luzon (Rizal), *B. S. 1036, 22685 Ramos, Merrill 7394*. In open grasslands at low and medium altitudes. Often confused with *D. triquetrum* DC., but easily distinguished by its glabrous, not strigose pods. Andaman and Great Coco Islands, Indo-China, and Malaya.

DESMODIUM BOLSTERI Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 102; Merr. op. cit. 5 (1910) Bot. 83.

Luzon (Cagayan, Nueva Ecija), *Bolster 181, Adduru 209, Warburg 12447, F. B. 22127 Alvarez*. On boulders along streams on slopes, etc., at low altitudes, apparently very local. Endemic.

DESMODIUM BUERGERI Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 45; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 85.

Luzon (Bontoc, Benguet, Laguna), *Williams 1400, 1402, Merrill 4374*. On open grassy slopes, borders of thickets, etc., at medium altitudes. Japan, Riu Kiu Islands, Formosa, Hainan, and probably also in China; reduced by most authors to *Desmodium heterocarpum* DC.

DESMODIUM CAPITATUM (Burm. f.) DC. Prodr. 2 (1825) 336; Miq. Fl. Ind. Bat. 1¹ (1855) 241; F.-Vill. Novis. App. (1880) 62; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 433; Vidal Phan. Cuming. Philip. (1885) 107, Rev. Pl. Vasc. Filip. (1886) 107; Perk. Frag. Fl. Philip. (1904) 18; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 65, 2 (1907) Bot. 276, 3 (1908) Bot. 81, 5 (1910) Bot. 84, Fl. Manila (1912) 240.

Hedysarum capitatum Burm. f. Fl. Ind. (1768) 167, t. 64, f. 1.

Meibomia capitata O. Kuntze Rev. Gen. Pl. (1891) 195.

Northern Luzon to Mindanao. In open grasslands at low and medium altitudes; common. India to Malaya.

Local names: Bilibig (Bik.); kalapikid (Bag.); maní-maní (Tag.); maní-manían (Pang., Tag.); maning-párang (Tag.).

DESMODIUM CUMINGIANUM (Benth.) F.-Vill. Novis. App. (1880) 61; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 107; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 80.

Dendrobium cumingianum Benth. in Miq. Pl. Jungh. (1852) 216; Miq. Fl. Ind. Bat. 1¹ (1855) 263.

Luzon (Batangas), *Cuming 1454, B. S. 22341 Ramos*. On dry slopes in thickets and secondary forests at low altitudes. Endemic.

Local name: Malakágyos (Tag.).

DESMODIUM DASYLOBUM Miq. Fl. Ind. Bot. Suppl. (1860-61) 305.

Desmodium sinuatum Blume ex Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 166; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 83, 356.

Desmodium strangulatum W. & A. var. *sinuatum* Miq. Fl. Ind. Bat. 1^a (1855) 255.

Meibomia sinuata O. Kuntze Rev. Gen. Pl. (1891) 198.

Luzon (Benguet, Bontoc, Kalinga, Lepanto), Mindanao (Bukidnon, Davao). In thickets, ravines, and forests, altitude 1,200 to 2,400 m. India to Formosa southward to New Guinea.

Local names: Karindapit (Buk.); kópat (Ig.); púlot (If.).

DESMODIUM GANGETICUM (Linn.) DC. Prodr. 2 (1825) 327; Blanco Fl. Filip. ed. 2 (1845) 408, ed. 3, 2 (1879) 384; Miq. Fl. Ind. Bat. 1^a (1855) 247; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 433; F.-Vill. Novis. App. (1880) 62; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 107; Perk. Frag. Fl. Filip. (1904) 18; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 65, 3 (1908) Bot. 81, 5 (1910) Bot. 87, Fl. Manila (1912) 241, Sp. Blancoanae (1918) 182.

Hedysarum gangeticum Linn. Sp. Pl. (1753) 746.

Desmodium gangeticum Linn. var. *neaei* DC. Prodr. 2 (1825) 327.

Hippocrepis multisiliquosa Blanco Fl. Filip. (1837) 584, non Linn.

Meibomia gangetica O. Kuntze Rev. Gen. Pl. (1891) 196.

Throughout the Philippines at low and medium altitudes, in thickets, open secondary forests, waste places, etc.; common. Tropics of the Old World, introduced in tropical America.

Local names: Andudúkut (Sul.); dikit-dikit (Tag.); kupkupies-ñg-babasit (Ilk.); mangkit (Tag.); paiang-paiang (Tag.); pega-péga (C. Bis.).

DESMODIUM GYRANS (Linn. f.) DC. Prodr. 2 (1825) 326; F.-Vill. Novis. App. (1880) 62; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 107; Perk. Frag. Fl. Philip. (1904) 18; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 86.

Hedysarum gyrans Linn. f. Suppl. (1781) 332.

Meibomia gyrans O. Kuntze Rev. Gen. Pl. (1791) 196.

Luzon (Cagayan, Lepanto, Bontoc, Benguet, Nueva Vizcaya), Mindanao (Davao, Bukidnon). In thickets, ravines, etc., chiefly at medium altitudes. India to Formosa, southward through Malaya to tropical Australia.

Local names: Dipdipíl (Bon.); dumtum (Buk.); sigbut-hapang (Bag.).

DESMODIUM GYROIDES (Roxb.) DC. Prodr. 2 (1825) 326; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 175; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 86.

Hedysarum gyroides Roxb. Hort. Beng. (1814) 57, *nomen nudum*.

Meibomia gyroides O. Kuntze Rev. Gen. Pl. (1891) 196.

Mindanao (Lanao), Palawan, *Clemens* 369, *Merrill* 9472. On slopes bordering forests, in thickets near lake shores, etc., at low and medium altitudes; very local. India to Formosa southward to New Guinea.

Local names: Karikut-rikut (Bag.); koer (Bag.).

DESMODIUM HETEROCARPUM (Linn.) DC. Prodr. 2 (1825) 337; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 84.

Hedysarum heterocarpum Linn. Sp. Pl. (1753) 747.

Hedysarum polycarpon Poir. in Lam. Encycl. 6 (1804) 413.

Desmodium polycarpum DC. Prodr. 2 (1825) 334; F.-Vill. Novis. App. (1880) 62; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc.

Filip. (1886) 107; Perk. Frag. Fl. Philip. (1904) 18; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 65.

Meibomia polycarpa O. Kuntze Rev. Gen. Pl. (1891) 196.

Northern Luzon to Mindanao. In thickets, open grasslands, etc., at low and medium altitudes; common. Tropical Africa and Asia through Malaya to Australia and Polynesia.

Local names: Huyop (If.); huyo-húyop (If.); mangkit-párang (Tag.); maní-maní (P. Bis.); mani-manían (Tag.); naangkonod (Mbo.); tagiktik (Mbo.); tayam (Tag.); timbalau (Bag.).

DESMODIUM HETEROPHYLLUM (Willd.) DC. Prodr. 2 (1825) 334; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 173; F.-Vill. Novis. App. (1880) 62; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 107; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 85, Fl. Manila (1912) 240.

Hedysarum heterophyllum Willd. Sp. Pl. 3 (1800) 1201.

Meibomia triphylla O. Kuntze Rev. Gen. Pl. (1891) 196.

Luzon (Ilocos Norte, Rizal, Tayabas), Polillo, Palawan. In open, usually damp grasslands, old clearings etc., at low and medium altitudes. India to the Mascarene Islands, southern China, and Malaya.

DESMODIUM LASIOCARPUM (Beauv.) DC. Prodr. 2 (1825) 328; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 88, Fl. Manila (1912) 241.

Hedysarum lasiocarpum Beauv. Fl. Oware Benin. 1 (1804) 32, t. 18; Poir. in Lam. Encycl. Suppl. 5 (1817) 15.

Hedysarum latifolium Roxb. Hort. Beng. (1814) 57, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 350.

Desmodium latifolium DC. Prodr. 2 (1825) 328; F.-Vill. Novis. App. (1880) 62; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 107; Perk. Frag. Fl. Philip. (1904) 18; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 65.

Meibomia lasiocarpa O. Kuntze Rev. Gen. Pl. (1891) 196.

Northern Luzon to Mindanao. In open grasslands, thickets, etc., at low and medium altitudes. Tropical Africa and Asia through Malaya to New Guinea; introduced in tropical America.

Local name: Magunlapi (Bag.).

DESMODIUM LAXIFLORUM DC. Prodr. 2 (1825) 335; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 164; F.-Vill. Novis. App. (1880) 61; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 107; Perk. Frag. Fl. Philip. (1904) 18; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 81, Sp. Blancoanae (1918) 183.

Desmodium recurvatum Grah. in Wall. Cat. (1832) No. 5717, *nomen nudum*; Benth. in Miq. Pl. Jungh. (1852) 225.

Hippocrepis comosa Blanco Fl. Filip. (1837) 584, non Linn.

Desmodium diversifolium Blanco op. cit. ed. 2 (1845) 408, ed. 3, 2 (1879) 384, non DC.

Northern Luzon to Palawan and Mindanao. In thickets, secondary forests, coconut groves, etc., at low and medium altitudes; often common. India to Formosa southward to Malaya.

Local names: Dokot-dókot (Bis.); kúpot (Ig.); mangkit (Tag.); mangkit-labúio (Tag.).

DESMODIUM LAXUM DC. in Ann. Sci. Nat. I 4 (1825) 102, Prodr. 2 (1825) 336; Prain in Journ. As. Soc. Beng. 66² (1897) 138; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 82.

Desmodium gardneri Benth. in Miq. Pl. Jungh. (1852) 226.

Desmodium leptopus A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 436; Miq. Fl. Ind. Bat. 1¹ (1855) 255; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 81, t. 1; F.-Vill. Novis. App. (1880) 61.

Meibomia leptopus O. Kuntze Rev. Gen. Pl. (1891) 198.

Babuyan Islands and northern Luzon to Mindanao. In shaded ravines, forests along streams, etc., mostly at medium altitudes. India to southern China southward to Malaya.

Local names: Bangbāṅga (Bag.); panikit (Mbo.); tagustus (Bik.).

DESMODIUM MALACOPHYLLUM (Link) DC. Prodr. 2 (1825) 338 (*malacophyllum*); F.-Vill. Novis. App. (1880) 62; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 84.

Hedysarum malacophyllum Link Enum. Hort. Berol. 2 (1822) 247.

Meibomia malacophylla O. Kuntze Rev. Gen. Pl. (1891) 198.

Luzon (Cavite?), *Chamisso* in herb. Berol. An imperfectly known endemic species known only from the original collection, perhaps really not originating in the Philippines.

DESMODIUM MICROPHYLLUM (Thunb.) DC. Prodr. 2 (1825) 337; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 86.

Hedysarum microphyllum Thunb. Fl. Jap. (1784) 284.

Desmodium parvifolium DC. in Ann. Sci. Nat. I 4 (1825) 100, Prodr. 2 (1825) 334; F.-Vill. Novis. App. (1880) 62.

Luzon (Bontoc, Benguet), Mindanao (Lanao). On open grassy slopes at medium altitudes, ascending to 2,200 m in Benguet. India to Japan southward to New Guinea.

DESMODIUM ORMOCARPOIDES DC. Prodr. 2 (1825) 327; Desv. in Mém. Soc. Linn. Paris 1825 (1826) 307; Gagnep. in Not. Syst. 3 (1916) 256; Merr. Interpret. Herb. Amb. (1917) 267, Philip. Journ. Sci. 14 (1919) 409, non auct. plur.

Hedysarum adhaerens Poir. in Lam. Encycl. Suppl. 5 (1817) 15, non Vahl.

Desmodium dependens Blume ex Miq. Fl. Ind. Bat. 1¹ (1855) 248.

Jolo, *Rola* 118, *Link* 42. In teak forests at low altitudes. Celebes, Moluccas, New Guinea, and northeastern Australia.

Local name: Sampautai (Sul.).

DESMODIUM OVALIFOLIUM Wall. Cat. (1832) No. 5730, *nomen nudum*; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 85.

Desmodium polycarpum DC. var. *ovalifolium* Prain ex King in Journ. As. Soc. Beng. 66² (1897) 141.

Luzon (Bataan), *Merrill* 7611, *Whitford* 227, *F. B.* 3115 *Meyer*. In primary forests, on ridges, altitude 150 to 1,100 m. Malay Peninsula, Sumatra.

DESMODIUM PODOCARPUM DC. in Ann. Sci. Nat. I 4 (1825) 102, Prodr. 2 (1825) 336; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 83.

Meibomia podocarpa O. Kuntze Rev. Gen. Pl. (1891) 198.

Luzon (Benguet), *Williams 1398, Merrill 4356*. In ravines and thickets, altitude 1,100 to 1,400 m. India to China and Japan.

DESMODIUM PROCUMBENS (Mill.) A. S. Hitchc. in Rept. Mo. Bot. Gard. 4 (1893) 76; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 82, Fl. Manila (1912) 239, Sp. Blancoanae (1918) 183.

Hedysarum procumbens Mill. Gard. Dict. ed. 8 (1768) No. 10.

Hedysarum spirale Sw. Prodr. (1788) 107.

Desmodium spirale DC. Prodr. 2 (1825) 332; Blanco Fl. Filip. ed. 2 (1845) 408, ed. 3, 2 (1879) 385; F.-Vill. Novis. App. (1880) 61; Perk. Frag. Fl. Philip. (1904) 19.

Desmodium chamissonis Vogel in Linnaea 10 (1836) 588.

Hippocrepis rhomboidea Blanco Fl. Filip. (1837) 585.

Meibomia chamissonis O. Kuntze Rev. Gen. Pl. (1891) 197.

Northern to central Luzon. In thickets, open places, etc., at low and medium altitudes in the settled areas. Introduced from tropical America, now pantropic.

DESMODIUM PSEUDOTRIQUETRUM DC. in Ann. Sci. Nat. I 4 (1825) 100, Prodr. 2 (1825) 326; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 87.

Luzon (Lepanto, Benguet, Rizal), *Merrill 4477, Williams 1414, Bona 20, Vanoverbergh 2169, B. S. 29494 Ramos & Eduño*. On dry open grassy slopes at medium altitudes. India, China, Formosa.

DESMODIUM PULCHELLUM (Linn.) Benth. Fl. Hongk. (1861) 83; F.-Vill. Novis. App. (1880) 61; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 107; Perk. Frag. Fl. Philip. (1904) 18; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 65, 5 (1910) Bot. 79, Fl. Manila (1912) 239, Sp. Blancoanae (1918) 184.

Hedysarum pulchellum Linn. Sp. Pl. (1753) 747; Blanco Fl. Filip. (1837) 581.

Dicerma pulchellum DC. in Ann. Sci. Nat. I 4 (1825) 236, Prodr. 2 (1825) 339; Blanco Fl. Filip. ed. 2 (1845) 407, ed. 3, 2 (1879) 383.

Zornia pulchella Pers. Syn. 2 (1807) 318.

Phyllodium pulchellum Desv. in Mém. Soc. Linn. Paris 4 (1826) 324; A. Gray. Bot. Wilkes U. S. Explor. Exped. (1854) 431; Miq. Fl. Ind. Bat. 1^a (1855) 260.

Meibomia pulchella O. Kuntze Rev. Gen. Pl. (1891) 197.

Northern Luzon to Palawan and Mindanao. Common in open thickets, waste places, etc., in the settled areas at low and medium altitudes. India to China and Formosa southward to tropical Australia.

Local names: Gaan-gaan (Sul.); kalaikai (C. Bis.); payang-payang (Tag.).

DESMODIUM QUINQUEPETALUM (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 20, Philip. Journ. Sci. 5 (1910) Bot. 81, Fl. Manila (1912) 239, Sp. Blancoanae (1918) 184.

Cytisus quinquepetalus Blanco Fl. Filip. (1837) 598.

Cajanus quinquepetalus Blanco op. cit. ed. 2 (1845) 417, ed. 3, 2 (1879) 397.

Glycine cajanoides Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843)

Suppl. 1: 324; F.-Vill. Novis. App. (1880) 62.

Desmodium cephalotes F.-Vill. Novis. App. (1880) 61, non Wall.

Northern to central Luzon (Ilocos Norte to Batangas). Common in thickets at low and medium altitudes. Endemic.

Local names: Bakiskis (Tag.); malakardís (Ilk.); marakardís (Pang., Ilk.); paispis (Tag.); pañgaldísan (Ig.); pañgardísan (Ilk.); payespes (Tag., Sbl.).

DESMODIUM SCALPE (Comm.) DC. Prodr. 2 (1825) 334; F.-Vill. Novis. App. (1880) 61; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 83.

Hedysarum scalpe Comm. ex DC. l. c. in syn.

Luzon (Bontoc, Lepanto, Benguet). In thickets, damp shaded ravines, etc., altitude 1,200 to 2,200 m. Tropical Africa, Asia, and Malaya.

Local names: Kúpat (Ig.); kupot (Ig.); pagpagbu (Ig.).

DESMODIUM SCORPIURUS (Sw.) Desv. in Journ. Bot. 1 (1813) 122; DC. Prodr. 2 (1825) 333; Perk. Frag. Fl. Philip. (1904) 18; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 65, 5 (1910) Bot. 81, Fl. Manila (1912) 239.

Hedysarum scorpiurus Sw. Prodr. (1788) 107.

Meibomia scorpiurus O. Kuntze Rev. Gen. Pl. (1891) 198.

Bataan Islands and northern Luzon to Balabac and Panay. In open dry thickets, on cliffs, in grasslands, etc., at low and medium altitudes. Introduced from tropical America, now also in Formosa and Polynesia.

Local name: Tagum-tágum (Bik.).

DESMODIUM STYRACIFOLIUM (Osbeck) Merr. in Am. Journ. Bot. 3 (1916) 580.

Hedysarum styracifolium Osbeck Dagbok Ostind. Resa (1757) 247; Linn. Syst. ed. 10 (1759) 1169.

Desmodium retroflexum DC. Prodr. 2 (1825) 336; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 267, 5 (1910) Bot. 85.

Hedysarum retroflexum Linn. Mant. 1 (1767) 103.

Meibomia retroflexa O. Kuntze Rev. Gen. Pl. (1891) 197.

Luzon (Ilocos Norte, Nueva Vizcaya), *B. S. 5278* McGregor, *32741* Ramos. In open dry grasslands at low altitudes. India to southern China.

DESMODIUM TRIFLORUM (Linn.) DC. Prodr. 2 (1825) 334; Miq. Fl. Ind. Bat. 1¹ (1855) 238; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 423; F.-Vill. Novis. App. (1880) 62; Vidal Rev. Pl. Vasc. Filip. (1886) 107; Perk. Frag. Fl. Philip. (1904) 19; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 81, 5 (1910) Bot. 85, Fl. Manila (1912) 240, Sp. Blancoanae (1918) 183.

Hedysarum triflorum Linn. Sp. Pl. (1753) 749.

Hippocrepis humilis Blanco Fl. Filip. (1837) 585.

Desmodium parvifolium Blanco op. cit. ed. 2 (1845) 408, ed. 3, 2 (1879) 386, non DC.

Meibomia triflora O. Kuntze Rev. Gen. Pl. (1891) 197.

In open grassy places, especially in and about towns throughout the Philippines. Pantropic.

Local name: Pakpák-láñgau (Tag.).

DESMODIUM TRIFOLIASTRUM Miq. Fl. Ind. Bat. 1¹ (1855) 248; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 273.

Panay, Mindanao (Zamboanga, Surigao), *B. S. 30694, 37017* Ramos & Edaño, *Piper 549*. In thickets along streams at low altitudes. Malay Peninsula, Sumatra, Java, Borneo.

DESMODIUM TRIQUETRUM (Linn.) DC. Prodr. 2 (1825) 326; F.-Vill. Novis. App. (1880) 61; Perk. Frag. Fl. Philip. (1904) 19; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 86, Fl. Manila (1912) 240.

Hedysarum triquetrum Linn. Sp. Pl. (1753) 746.

Pteroloma triquetrum Benth. in Miq. Pl. Jungh. (1852) 220.

Meibomia triquetra O. Kuntze Rev. Gen. Pl. (1891) 197.

Culion, Mindanao (Bukidnon), *Merrill 519, B. S. 181* Bermejos, *15668 Fénir, 39222* Ramos & Edaño. In thickets, secondary forests, etc., at low and medium altitudes. India to the Mascarene Islands, southern China through Malaya to northeastern Australia.

Local name: Dakot-dákot (Tag.).

DESMODIUM UMBELLATUM (Linn.) DC. Prodr. 2 (1825) 325; F.-Vill. Novis. App. (1880) 61; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 106, Synopsis Atlas (1883) 23, *t. 41, f. D*; Perk. Frag. Fl. Philip. (1904) 19; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 25, Philip. Journ. Sci. 1 (1906) Suppl. 65, 3 (1908) Bot. 409, 5 (1910) Bot. 80, Sp. Blancoanae (1918) 183.

Hedysarum umbellatum Linn. Sp. Pl. (1753) 747.

Aeschynomene arborea Linn. Sp. Pl. (1753) 713; Blanco Fl. Filip. (1837) 581, ed. 2 (1845) 406, ed. 3, 2 (1879) 381, non *Desmodium arboreum* Sweet.

Dendrolobium umbellatum W. & A. ex Benth. Pl. Jungh. (1852) 216; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 431; Miq. Fl. Ind. Bat. 1¹ (1855) 262.

Along the seashore throughout the Philippines, occasionally found growing inland (Batan and Babuyan Islands). Mascarene Islands and tropical Asia through Malaya to northern Australia and Polynesia.

Local names: Gógo (Ibn.); huyat-bágio (C. Bis.); kabay-kábai (Tag.); kaubol (Bag.); malakários (Sbl.); malapigas (Tag.); miágos (P. Bis.); matang-urang (Bik.); tuyat-bágio (Bis.).

DESMODIUM VIRGATUM Zoll. Nat. Geneesk. Arch. Ind. 3 (1846) 58; Prain in Journ. As. Soc. Beng. 66² (1897) 143, 399; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 103, Merr. op. cit. 5 (1910) Bot. 87, Fl. Manila (1912) 240, Sp. Blancoanae (1918) 182.

Desmodium gangeticum Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t. 377*, non DC.

Luzon (Rizal, Bataan, Laguna), Palawan, Panay. In thickets at low altitudes. Burma, Malay Peninsula, Java.

DESMODIUM ZONATUM Miq. Fl. Ind. Bat. 1¹ (1855) 250; Gagnep. Not. Syst. 3 (1916) 257.

Desmodium ormocarpoides Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 164; F.-Vill. Novis. App. (1880) 61; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 108; Perk. Frag. Fl.

Philip. (1904) 18; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 276, 5 (1910) Bot. 82, non DC.

Luzon (Laguna, Tayabas, Camarines, Sorsogon), Mindoro, Palawan, Samar, Leyte, Cebu, Panay, Mindanao. In thickets and forests at low and medium altitudes. India through Malaya to New Guinea.

Local names: Kalapikid (Bag.); torokot (Sub.).

EXCLUDED SPECIES

DESMODIUM ELEGANS Benth.; Hemsl. in Journ. Linn. Soc. Bot. 23 (1887) 171.

The Philippine range for this species was probably based on erroneously identified specimens of *Desmodium pulchellum* Benth.

DESMODIUM KINGIANUM Prain; Usteri Beitr. Ken. Philip. Veg. (1905) 115.

The Cebu and Panay records of Usteri were probably based on wrongly named specimens.

DESMODIUM PILOSIUSCULUM DC. Prodr. 2 (1825) 335, Ann. Sci. Nat. 4 (1825) 101; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 88.

"In Philippicis ? ex herb. Thibaud," Prodr.; "In insulis Philippinis (in herb. Thibaud ex itin. Neaei)," Ann. Sci. Nat. The type specimen in the de Candolle herbarium represents a species remote from all the known Philippine forms. In Index Kewensis it is reduced to the American *D. uncinatum* DC. The specimen was certainly not from the Philippines.

DESMODIUM RENIFORME DC.; F.-Vill. Novis. App. (1880) 62.

52. MONARTHROCARPUS Merrill

MONARTHROCARPUS SECURIFORMIS (Benth.) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 89.

Desmodium securiforme Benth. in Miq. Pl. Jungh. (1852) 226; Miq. Fl. Ind. Bat. 1^a (1855) 255; F.-Vill. Novis. App. (1880) 62; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 108.

Luzon (Cagayan, Laguna, Sorsogon), Polillo, Mindoro, Mindanao, Basilan. In primary forests on slopes at low and medium altitudes, widely scattered. A monotypic endemic genus.

Var. MONOPHYLLA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 90.

Mindanao. Habitat of the species.

53. PSEUDARTHRIA Wight and Arnott

PSEUDARTHRIA VISCIDA (Linn.) W. & A. Prodr. (1834) 209; Wight Ic. t. 286; Ceron Cat. Pl. Herb. Manila (1892) 62; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 90.

Hedysarum viscidum Linn. Sp. Pl. (1753) 747.

Desmodium viscidum DC. Prodr. 2 (1825) 336.

Desmodium timoriense DC. op. cit. 327.

Luzon (Bulacan), Panay, Negros, Merrill Phil. Pl. 212, 1964. In waste places near towns, deserted clearings, coconut groves, etc. India, through Malaya to Timor.

Local names: Gunit-gunit (P. Bis.); mankit (Tag.).

54. TRIFIDACANTHUS Merrill

TRIFIDACANTHUS UNIFOLIOLATUS Merr. in Philip. Journ. Sci. 12 (1917) Bot. 269, op. cit. 14 (1919) 405.

Luzon (Ilocos Norte, Batangas), *B. S.* 27196, 32925 Ramos, *F. B.* 28265 Salit. In dry thickets at low altitudes. A monotypic endemic genus.

55. PYCNOSPORA R. Brown

PYCNOSPORA NERVOSA (Grah.) W. & A. Prodr. (1834) 197; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 91.

Crotalaria ? *neriosa* Grah. in Wall. Cat. (1832) No. 5428, *nomen nudum*.

Pycnospora hedysaroides R. Br. ex W. & A. Prodr. (1834) 197; F.-Vill. Novis. App. (1880) 60; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 108; Perk. Frag. Fl. Philip. (1904) 19.

Luzon (Benguet, Bulacan, Rizal), Culion, Semirara, Panay, Mindanao (Bukidnon, Lanao, Davao). In open grasslands at low and medium altitudes. India to southern China and Formosa, and tropical Australia.

56. ALYSICARPUS Necker

ALYSICARPUS BUPLEURIFOLIUS (Linn.) DC. Prodr. 2 (1825) 352; Miq. Fl. Ind. Bat. 1¹ (1855) 232; F.-Vill. Novis. App. (1880) 61; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 108; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 91, Fl. Manila (1912) 241.

Hedysarum bupleurifolium Linn. Sp. Pl. (1753) 745.

Fabricia bupleurifolia O. Kuntze Rev. Gen. Pl. (1891) 181.

Northern Luzon to Mindanao. In open grasslands, fallow rice paddies, etc., in the settled areas at low altitudes, locally abundant. India to southern China, Mascarene Islands, through Malaya to Polynesia.

ALYSICARPUS NUMMULARIFOLIUS (Linn.) DC. Prodr. 2 (1825) 353; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 92, Fl. Manila (1912) 242.

Hedysarum nummularifolium Linn. Sp. Pl. (1753) 746, excl. Fl. Zeyl. 288.

Alysicarpus vaginalis DC. var. *nummularifolius* Miq. Fl. Ind. Bat. 1¹ (1855) 232.

Fabricia nummularifolia O. Kuntze Rev. Gen. Pl. (1891) 181.

Throughout the Philippines in open grasslands at low and medium altitudes; variable. Tropics of the Old World, introduced in tropical America.

Local names: Banig-usa (Tag.); maní-manían (Tag.); maní-maní (P. Bis.); maramaní (Ik.).

ALYSICARPUS VAGINALIS (Linn.) DC. Prodr. 2 (1825) 353; Miq. Fl. Ind. Bat. 1¹ (1855) 231; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 108; Perk. Frag. Fl. Philip. (1904) 19; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 65, 3 (1908) Bot. 410, 5 (1910) Bot. 92, Fl. Manila (1912) 242.

Hedysarum vaginale Linn. Sp. Pl. (1753) 746.

Northern Luzon to Panay and Negros; habitat of the preceding species. Tropical Asia and Malaya.

EXCLUDED SPECIES

ALYSICARPUS TETRAGONOLOBUS Edgw.; F.-Vill. Novis. App. (1880) 61.

57. URARIA Desvaux

URARIA LAGOPODIODES (Linn.) Desv. in Mém. Soc. Linn. Paris 4 (1826) 309; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 93, Fl. Manila (1912) 242.

Hedysarum lagopodioides Linn. Sp. Pl. (1753) 1198; Poir. in Lam. Encycl. 6 (1804) 412.

Hedysarum lagopoides Burm. f. Fl. Ind. (1768) 168, t. 53, f. 2.

Uraría lagopoides DC. Prodr. 2 (1825) 324; Vogel in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 27; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 430; Miq. Fl. Ind. Bat. 1¹ (1855) 268; Vidal Phan. Cuming. Philip. (1886) 108; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 81.

Northern Luzon to Mindanao. In open grasslands at low and medium altitudes, often abundant. India to southern China and Formosa through Malaya to tropical Australia.

Local names: Basingkaran (Bag.); ikug-kuting (Sub.).

URARIA PICTA (Jacq.) Desv. Journ. Bot. 1 (1813) 123, t. 5, f. 19; DC. Prodr. 2 (1825) 324; Miq. Fl. Ind. Bat. 1¹ (1855) 267; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 430; F.-Vill. Novis. App. (1880) 61; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 108; Perk. Frag. Fl. Philip. (1904) 19; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 81, 5 (1910) Bot. 93.

Hedysarum pictum Jacq. Coll. 2 (1788) 262, Ic. 3 (1786-93) t. 567.

Northern Luzon to Mindanao, occasional in open grasslands and thickets at low and medium altitudes. Tropical Africa, Asia, and Australia, introduced in tropical America.

57. LOUREA Necker

LOUREA OBCORDATA (Poir.) DC. Prodr. 2 (1825) 324; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 154; F.-Vill. Novis. App. (1880) 60; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 108; Perk. Frag. Fl. Philip. (1904) 20.

Hedysarum obcordatum Poir. in Lam. Encycl. 6 (1804) 425.

Hedysarum reniforme Lour. Fl. Cochinch. (1790) 447, non Linn.

Lourea reniformis DC. Prodr. 2 (1825) 324; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 94, 354.

Luzon (Cagayan, Abra, Ilocos Norte, Lepanto, Bontoc, Benguet, Nueva Vizcaya), Coron, Mindanao (Davao, Zamboanga). In open grasslands at low and medium altitudes. Burma to southern China and Formosa through Malaya to tropical Australia.

LOUREA VESPERTILIONIS (Linn. f.) Desv. Journ. Bot. 1 (1813) 122, t. 5, f. 18; DC. Prodr. 2 (1825) 323; F.-Vill. Novis. App. (1880) 60; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 93, Fl. Manila (1912) 243, Sp. Blancoanae (1918) 184.

Hedysarum vespertilionis Linn. f. Suppl. (1837) 331; Blanco Fl. Filip. (1837) 581, ed. 2 (1845) 407, ed. 3, 2 (1879) 382, t. 201.

An introduced species, very rarely cultivated in Manila gardens, apparently a native of Siam, but now pantropic in cultivation.

59. *PHYLACIUM* Bennett

PHYLACIUM BRACTEOSUM Benn. Pl. Jav. Rar. (1840) 159, t. 33; Benth. in Miq. Pl. Jungh. (1852) 231; Miq. Fl. Ind. Bat. 1¹ (1855) 228; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 423; Vidal Rev. Pl. Vasc. Filip. (1886) 108; Perk. Frag. Fl. Philip. (1904) 20; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 94, 354.

Northern Luzon to Mindanao. In thickets at low and medium altitudes, ascending to 1,400 m; locally abundant. Malay Peninsula to New Guinea.

Local names: Ditching (Ig.); ditidit (Ig.); kopkopeyes-a-limánot (Ilk.); takílis (P. Bis.).

60. *LESPEDEZA* L. C. Richard

LESPEDEZA SERICEA (Thunb.) Miq. Ann. Mus. Bot. Lugd.-Bat. 3 (1867) 49.

Hedysarum sericeum Thunb. Fl. Jap. (1784) 287.

Lespedeza juncea Pers. Syn. 2 (1807) 318, var *sericea* Forbes & Hemsl. in Journ. Linn. Soc. Bot. 23 (1887) 181; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 104, 5 (1910) Bot. 94.

Luzon (Bontoc, Lepanto, Benguet), *Loher 2336, Williams 1420, Vano-verbergh 458, 541, B. S. 5991 Ramos, 40204 Ramos & Edaña, 13989 Santos*. On open grassy slopes, altitude 1,200 to 2,200 m. India to Japan and Formosa; also in Australia.

Local name: Lalagim (Ig.).

61. *DALBERGIA* Linnaeus f.

DALBERGIA CANDENATENSIS (Dennst.) Prain in Journ. As. Soc. Beng. 70² (1901) 49, Bengal Plants (1903) 411; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 97.

Cassia candenatensis Dennst. Schlüs. Hort. Malabar. (1818) 32.

Dalbergia monosperma Dalz. in Hook. Journ. Bot. Kew Miscel. 2 (1850) 36; F.-Vill. Novis. App. (1880) 67; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 112; Perk. Frag. Fl. Philip. (1904) 82.

Dalbergia torta Grah. in Wall. Cat. (1832) No. 5873, *nomen nudum*; Prain in Journ. As. Soc. Beng. 66² (1897) 120, Ann. Bot. Gard. Calcutta 10 (1904) 64, t. 42; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 66.

Central Luzon (Bataan, Tayabas) to Mindanao. In thickets along tidal streams subject to the influence of salt or brackish water. India to southern China southward to New Guinea, Australia, Marianne and Caroline Islands, a strictly littoral species.

DALBERGIA CANESCENS (Elm.) comb. nov.

Derris canescens Elm. Leaf. Philip. Bot. 8 (1919) 3087.

Luzon (Laguna), *Elmer 17883*. Near the margins of forests at low altitudes. Endemic.

DALBERGIA CUMINGIANA Benth. in Miq. Pl. Jungh. (1852) 255; Miq. Fl. Ind. Bat. 1¹ (1855) 129; F.-Vill. Novis. App. (1880) 67; Vidal Rev. Pl. Vasc. Filip. (1886) 111, Phan. Cuming. Philip. (1885) 109; Prain in Journ. As. Soc. Beng. 70² (1901) 63, Ann. Bot. Gard.

Calcutta 10 (1904) 34, t. 7; Perk. Frag. Fl. Philip. (1904) 98; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 98.

Dalbergia cumingii Benth. in Journ. Linn. Soc. Bot. 4 (1860) Suppl. 32.

Northern Luzon (Cagayan) to Mindanao. In thickets and secondary forests at low and medium altitudes, locally common. Endemic.

Local names: Bulauini (Ibn.); ganák (Ibn.); hamuráuo (S. L. Bis.); kanák (Ibn.); karbílán (Bik.); tahid-labúyo (Tag.).

DALBERGIA DENSE Benth. in Hook. Lond. Journ. Bot. 2 (1843) 217; Prain. in Ann. Bot. Gard. Calcutta 10 (1904) 73, t. 53.

Cebu, Mindanao (Zamboanga), *B. S. 11021* Ramos, *F. B. 9308* Whitford & Hutchinson. In thickets at low altitudes. Moluccas to New Guinea, a variety in northeastern Australia.

DALBERGIA FERRUGINEA Roxb. Hort. Beng. (1814) 98, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 228; Miq. Fl. Ind. Bat. 1¹ (1855) 133; Prain in Ann. Bot. Gard. Calcutta 10 (1904) 101, t. 86; Perk. Frag. Fl. Philip. (1904) 81; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 65, 3 (1908) Bot. 410, 5 (1910) Bot. 97, Fl. Manila (1912) 247.

Dalbergia luzonensis Vogel in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 33; Miq. Fl. Ind. Bat. 1¹ (1855) 133.

Dalbergia limonensis Benth. in Miq. Pl. Jungh. (1852) 256, sphalm.

Dalbergia stipulacea F.-Vill. Novis. App. (1880) 67; Vidal Sinopsis Atlas (1883) t. 40, f. C, Rev. Pl. Vasc. Filip. (1886) 111, non Roxb.

Dalbergia ferruginea Roxb. var. *daronensis* Elm. Leaf. Philip. Bot. 2 (1910) 699.

Northern Luzon to Palawan and Mindanao. In thickets and secondary forests at low and medium altitudes, common. Borneo to New Guinea and the Caroline Islands.

Local names: Balibágan (P. Bis.); balintodok (Bag.); balitadhan (Mbo.); gipus-gipus (Sul.); kulik-manók (Pamp.).

DALBERGIA MIMOSELLA (Blanco) Prain in Ann. Bot. Gard. Calcutta 10 (1904) 42; Merr. Sp. Blancoanae (1918) 184.

Amerimnon mimosella Blanco Fl. Filip. (1837) 563, ed. 2 (1845) 393, ed. 3, 2 (1879) 358; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 40.

Dalbergia minahassae Koord. in Meded. Lands Plantent. 19 (1898) 430, 630; Prain in Ann. Bot. Gard. Calcutta 10 (1904) 91, t. 73; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 98.

Dalbergia lanceolaria Llanos in Mem. Acad. Cienc. Madr. (1858); F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 103; F.-Vill. Novis. App. (1880) 67, non Linn.

Dalbergia cassioides A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 457; Merr. in Philip. Journ. Sci. 3 (1908) 82, non Wall.

Dalbergia davaoensis Elm. Leaf. Philip. Bot. 2 (1910) 700.

Luzon (Bontoc, Bulacan, Rizal, Laguna, Tayabas, Bataan), Mindanao. In secondary forests at low and medium altitudes. Celebes.

Local names: Balabágan (Mang.); balaúgan (P. Bis.); balbálan (Bag.); karanaipati (Bag.); langlin (Tag.); makapil (Tag.); malasampalok (Tag.); matang-buyud (Bik.); talongdang (Tag.).

DALBERGIA PINNATA (Lour.) Prain in Ann. Bot. Gard. Calcutta 10 (1904) 48; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 96.

Derris pinnata Lour. Fl. Cochinch. (1790) 432.

Dalberia tamarindifolia Roxb. Hort. Beng. (1814) 53, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 233, p. p.; Miq. Fl. Ind. Bat. 1¹ (1855) 131; F.-Vill. Novis. App. (1880) 67; Vidal Rev. Pl. Vasc. Filip. (1886) 111; Prain in Ann. Bot. Gard. Calcutta 10 (1904) 69, t. 48; Perk. Frag. Fl. Philip. (1904) 82.

Endespermum scandens Blume Cat. Gew. Buitenz. (1823) 92.

Dalbergia dubia Elm. Leaf. Philip. Bot. 8 (1915) 2731.

Northern Luzon to Palawan and Mindanao. In thickets and forests at low and medium altitudes, ascending to 1,400 m. India to southern China southward to Borneo, Sumatra, and Java.

Local name: Tikos-maiadon (Mbo.).

Var. **BADIA** Merr. in Philip. Journ. Sci. 5 (1910) Bot. 96.

Luzon (Tayabas), *F. B. 9649 Curran*. In thickets along the seashore. Endemic.

DALBERGIA POLYPHYLLA Benth. in Miq. Pl. Jungh. (1851) 256, Journ. Linn. Soc. Bot. 4 (1860) Suppl. 44; Miq. Fl. Ind. Bat. 1¹ (1855) 132; F.-Vill. Novis. App. (1880) 67; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 112; Prain in Journ. As. Soc. Beng. 70² (1901) 48, Ann. Bot. Gard. Calcutta 10 (1904) 70, t. 49; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 96.

Luzon (Ilocos Sur, Nueva Vizcaya, Bulacan, Rizal, Bataan), *Cuming 1164, B. S. 14155 McGregor, 34056 Ramos & Edaño, F. B. 2962 Ahern's collector*. In thickets and secondary forests at low and medium altitudes. Endemic.

Local name: Pakpakaouit (If.).

DALBERGIA RETICULATA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 14.

Luzon (Laguna), *F. B. 21406 Villamil, Elmer 18340*. In primary forests, altitude 400 to 500 m. Endemic.

DALBERGIA SUBALTERNIFOLIA (Elm.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 14.

Derris subalternifolia Elm. Leaf. Philip. Bot. 5 (1913) 1801.

Palawan, Mindanao (Zamboanga), *Elmer 12965, Merrill 9345, B. S. 37005, 36740 Ramos & Edaño*. In primary forests at low and medium altitudes; closely allied to *Dalbergia densa* Benth. Borneo.

Local name: Tubalau (Sub.).

EXCLUDED SPECIES

DALBERGIA DISCOLOR Blume; F.-Vill. Novis. App. (1880) 67.

DALBERGIA SPINOSA Roxb.; F.-Vill. l. c.

DALBERGIA VOLUBILIS Roxb.; Llanos in Mem. Acad. Cienc. Madr. (1858); F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 103; F.-Vill. Novis. App. (1880) 67.

DALBERGIA ZOLLINGERIANA Miq.; F.-Vill. l. c.

62. **PTEROCARPUS** Linnaeus

PTEROCARPUS BLANCOI Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 7, 27 (1905) 40, Philip. Journ. Sci. 5 (1910) Bot. 100, Sp. Blancoanae (1918) 185.

Pterocarpus santalinus Blanco Fl. Filip. (1837) 561, ed. 2 (1845) 392, ed. 3, 2 (1879) 356; F.-Vill. Novis. App. (1880) 67, non Linn.

Luzon (Union, Nueva Ecija, Bulacan, Rizal), *Elmer 5690*, *F. B. 11054 Saroca, 7203 Curran, Merrill Sp. Blancoanae 995* (sterile), *Decades Philip. For. Fl. 203*. In forests at low and medium altitudes; scarcely other than a large-fruited form of *Pterocarpus indicus* Willd. Endemic.

Local names: Apálit (Pamp.); asana (Tag.); nárra (Tag.); sanki (Bis.).

PTEROCARPUS INDICUS Willd. Sp. Pl. 3 (1800) 904; Miq. Fl. Ind. Bat. 1^a (1855) 135; F.-Vill. Novis. App. (1880) 67; Vidal Sinopsis Atlas (1883) 23, t. 40, f. A, Rev. Pl. Vasc. Filip. (1886) 112, Phan. Cuming. Philip. (1885) 109; Perk. Frag. Fl. Philip. (1904) 20; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 410, 5 (1910) Bot. 100, Fl. Manila (1912) 246, Sp. Blancoanae (1918) 158.

Pterocarpus pallidus Blanco Fl. Filip. (1837) 560, ed. 2 (1845) 391, ed. 3, 2 (1879) 355, t. 205.

Throughout the Philippines at low and medium altitudes, in primary and in some regions in secondary forests. Tenasserim to New Guinea and the Caroline Islands.

Local names: Agána (Tag.); asaná (Tag.); asanáng-puti (Tag.); balauning (Mang.); bital (Sul.); daitanag (Pamp.); hagad (Neg.); kama-rág (Ibn.); nága (Bik., S. L. Bis., P. Bis., C. Bis., Mbo.); nála (Lan., Mag.); nára (Tag.); nárra (commercial, most dialects); narrang-pulá (Tag.); odiáu (Pang.); sagát (Ibn., Neg.); taggá (Ibn.); tágka (Ibn.); vitali (Lan.).

PTEROCARPUS PUBESCENS Merr. in Philip. Journ. Sci. 12 (1917) Bot. 271.

Luzon (Bontoc), *Vanoverbergh 3959*. In thickets or forests along streams, altitude about 1,300 m.

Local name: Nárra (Ilk.).

PTEROCARPUS VIDALIANUS Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 309, Vidal Rev. Pl. Vasc. Filip. (1886) 112; Perk. Frag. Fl. Philip. (1904) 20; Gagnep. in Not. Syst. 2 (1913) 371.

Pterocarpus erinaceus F.-Vill. Novis. App. (1880) 68, Vidal Sinopsis Atlas (1883) t. 40, f. B, non Poir.

Pterocarpus echinatus Prain in Ind. Forest. 26 (1900) 10 quoad. pl. Philip.; Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 20, Philip. Journ. Sci. 5 (1910) Bot. 99, Fl. Manila (1912) 247, non Pers.

Pterocarpus klemmei Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 198.

Luzon (Cagayan, Ilocos Norte, Ilocos Sur, Bulacan, Laguna, Tayabas, Camarines, Sorsogon), Mindoro. In forests at low and medium altitudes. Endemic.

Gagnepain has shown by an examination of Persoon's type of *Pterocarpus echinatus* that the Philippine form is specifically distinct.

Local names: Antógan (Ibn.); asána (Tag.); dágga (Ibn.); nárra (commercial name, Tag., Ilk., Ibn.); nága (Bik., P. Bis., C. Bis., Mbo., Mag.); tágga (Ibn., Neg.); tagká (Ibn.).

63. KUNSTLERIA Prain

KUNSTLERIA ATROVIOLACEA (Elm.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 14.

Derris atrovioleacea Elm. Leaflet. Philip. Bot. 5 (1913) 1798.

Palawan, *Elmer 12965*. In secondary forests at low altitudes. Endemic.

KUNSTLERIA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 359.

Leyte, Basilan, *Wenzel 836, 818, B. S. 16114 Reillo*. In forests, altitude up to 500 m. Endemic.

64. PONGAMIA Ventenat

PONGAMIA PINNATA (Linn.) Merr. Interpret. Herb. Amb. (1917) 271, Sp. Blancoanae (1918) 185.

Cytisus pinnatus Linn. Sp. Pl. (1753) 741.

Robinia mitis Linn. op. cit. ed. 2 (1763) 1044.

Galedupa indica Lam. Encycl. 2 (1786) 594, excl. syn. Rumph.

Dalbergia arborea Willd. Sp. Pl. 3 (1803) 901.

Pongamia glabra Vent. Jard. Malm. 1 (1803) 28, t. 28; Miq. Fl. Ind.

Bat. 1¹ (1855) 147; F.-Vill. Novis. App. (1880) 68; Vidal Sinopsis

Atlas (1883) 23, t. 41, f. C; Rev. Pl. Vasc. Filip. (1886) 113;

Merr. in Philip. Bureau Forestry Bull. 1 (1903) 25, Philip. Journ.

Sci. 1 (1906) Suppl. 66, 3 (1908) Bot. 82; Perk. Frag. Fl. Philip.

(1904) 21.

Galedupa maculata Blanco Fl. Filip. (1837) 559, ed. 2 (1845) 390,

ed. 3, 2 (1879) 353, t. 417.

Pongamia mitis Merr. in Philip. Journ. Sci. 5 (1910) Bot. 101, Fl.

Manila (1912) 247.

Galedupa pinnata Taub. in Engl. & Prantl Nat. Pflanzenfam. 3²

(1891) 344.

Caju pinnatum O. Kuntze Rev. Gen. Pl. (1891) 167.

Pterocarpus flavus Lour. Fl. Cochinch. (1790) 431; F.-Vill. Novis.

App. (1880) 67.

Throughout the Philippines along the seashore, common; in some localities extending inland (Laguna), near the borders of lakes. Mascarene Islands, tropical Asia, across Malaya to Australia and Polynesia.

Local names: Bagnéi (Ibn.); balikbálik (Tag.); balu-balu (Sul.); balok (Tag.); balok-bálok (Tag., Bik.); balu-bálu (Yak.); baluk-báluk (C. Bis.); balotbalot (Tag.); balutbalut (Mag.); baní (Tag., Ilk., Sbl., Pamp.); banít (Tag.); baobáo (Mbo.); bayog-báyok (Tag., C. Bis.); bayok-báyok (C. Bis.); butong (Bis.); kadel (Tag.); magit (Mag.); malok-balok (P. Bis.); marok-bárok (Bik., S. L. Bis.); maruk-báruk (C. Bis.); marobáhai (Tag.).

Var. XEROCARPA (Hassk.) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 101.

Pongamia xerocarpa Hassk. Hort. Bogor. Descr. (1858) 208.

Pongamia glabra Vent. var. *xerocarpa* Prain in Journ. As. Soc. Beng.

66² (1897) 95.

Northern Luzon to Mindanao, rather the inland than the coastal form. Ceylon to Malaya.

65. DERRIS Loureiro

DERRIS CEBUENSIS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 273.

Derris surigaoensis Elm. Leaf. Philip. Bot. 8 (1915) 2733.

Luzon (Sorsogon), Leyte, Cebu, Mindanao (Agusan), *B. S. 11014*, Ramos, Wenzel 1530, Elmer 13463, 16961. In thickets and forests at low and medium altitudes. Endemic.

Local names: Bagodon (Mbo.); bagodon-ihanon (Mbo.).

DERRIS CUMINGII Benth. in Journ. Linn. Soc. Bot. 4 (1860) Suppl. 104;

Vidal Phan. Cuming. Philip. (1885) 109; Perk. Frag. Fl. Philip.

(1904) 82; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 104.

Derris cumingiana Vidal Rev. Pl. Vasc. Filip. (1886) 113.

Luzon (Ilocos Norte, Benguet, Pampanga, Rizal), *Cuming 1208*, Merrill 1867, 2824, Phil. Pl. 41, F. B. 5133 Curran, 1140, 1129, 2986 Ahern's collector. In thickets at low and medium altitudes. Endemic.

Local names: Malakadiós (Tag.); malakagiós (Tag.); marakatúdai (Iik.).

DERRIS ELEGANS (Grah.) Benth. in Miq. Pl. Jungh. (1852) 252; Journ.

Linn. Soc. Bot. 4 (1860) Suppl. 109; Prain ex King in Journ. As.

Soc. Beng. 66² (1897) 103; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 105.

Pongamia elegans Grah. in Wall. Cat. (1832) No. 7540.

Culion, Palawan, Negros, Leyte, Mindanao, Merrill 666, Phil. Pl. 1306, Elmer 7162, Clemens 484, F. B. 7249 Everett, 21990 Villamil. In thickets and forests at low and medium altitudes. Tenasserim and the Andaman Islands, to southern China southward to the Moluccas.

DERRIS ELLIPTICA (Roxb.) Benth. in Journ. Linn. Soc. Bot. 4 (1860)

Suppl. 111; F.-Vill. Novis. App. (1880) 68; Merr. in Philip. Journ.

Sci. 1 (1906) Suppl. 66, 2 (1907) Bot. 433, 5 (1910) Bot. 106, Sp.

Blancoanae (1918) 186.

Galedupa elliptica Roxb. Hort. Beng. (1814) 53, *nomen nudum*, Fl.

Ind. ed. 2, 3 (1832) 242.

Cylista piscatoria Blanco Fl. Filip. (1837) 589.

Galactia terminaliflora Blanco op. cit. ed. 2 (1845) 411, ed. 3, 2 (1879) 390.

Millettia splendidissima Vidal Cat. Pl. Prov. Manila (1880) 25, non Blume.

Millettia piscatoria Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 37,

29 (1905) 18; Dunn in Journ. Linn. Soc. Bot. 41 (1912) 239.

Northern Luzon to Mindanao. In thickets along streams, secondary forests, etc., at low and medium altitudes; often abundant. Chittagong through Malaya to New Guinea and the Bismarck Archipelago.

Local names: Báuit (Tag.); lapák (Bik.); malasiag (Tag.); tibalau (Tag.); tibanglán (Tag.); tubali (Bag.); tublí (P. Bis., Tag., Buk.); tuglí (Tag.); tuglíng-pulá (Tag.); tuva (Iv.); upei (Bon.).

DERRIS HEPTAPHYLLA (Linn.) Merr. Interpret. Herb. Amb. (1917) 273,

Sp. Blancoanae (1918) 186.

Sophora heptaphylla Linn. Sp. Pl. (1753) 373, excl. syn. Plukenet.

Pongamia sinuata Wall. Cat. (1832) No. 5911, *nomen nudum*.

Pterocarpus diadelphus Blanco Fl. Filip. (1837) 563, ed. 2 (1845) 393, ed. 3, 2 (1879) 357; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 40.

Derris sinuata Thwaites Enum. Pl. Zeyl. (1859) 93; Benth. in Journ. Linn. Soc. Bot. 4 (1860) Suppl. 113; F.-Vill. Novis. App. (1880) 68; Vidal Rev. Pl. Vasc. Filip. (1886) 112; Perk. Frag. Fl. Philip. (1904) 84; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 66.

Derris thyrsiflora F.-Vill. Novis. App. (1880) 68, non Benth.

Derris floribunda Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 336, non Benth.

Derris diadelpha Merr. in Philip. Journ. Sci. 5 (1910) Bot. 103, Fl. Manila (1912) 248.

Luzon (Cagayan, Union, Pangasinan, Zambales, Bataan, Rizal), Mindoro, Palawan, Negros, Leyte, Biliran, Mindanao. In thickets, secondary forests, etc., at low and medium altitudes. India to Indo-China and Malaya.

Local names: Asiasimánan (Tag.); bagalbal (Lan.); balai-lamók (Ilk.); balios (P. Bis.); dugo-dúgo (Tag.); dugo-rógo (Tag.); labnit (Kuy.); paian (Mbo.); rugo-rúgo (Tag.); sila-sila (Tag.); tibaláu (Tag.).

DERRIS LIANOIDES Elm. Leaf. Philip. Bot. 1 (1907) 228; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 106.

Northern Luzon to Palawan and Mindanao, *B. S.* 17640, 33043 *Ramos*, *Merrill* 9347, 9225, *Elmer* 7443, 15754, 9339, *Clemens* 537. In thickets and forests at low and medium altitudes. Endemic.

DERRIS MICANS Perk. Frag. Fl. Philip. (1904) 82; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 106.

Luzon (Ilocos Norte, Pangasinan, Bulacan, Rizal), Alabat, Palawan, *Merrill* 2284, 10481, *B. S.* 4584, 27271, 21965 *Ramos*, 29530 *Ramos & Edaña*, 18281 *Otanes*, *Elmer* 12814, 13078. In thickets and secondary forests at low and medium altitudes. Endemic.

Local names: Tablong (Tag.); tublí (Tag.); tuglí (Tag.).

DERRIS MINDORENSIS Perk. Frag. Fl. Philip. (1904) 82; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 106.

Mindoro, Mindanao (Surigao), *B. S.* 39669 *Ramos*, *Merrill* 953, *Bolster* 406. In thickets at low altitudes; scarcely distinguishable from *Derris ferruginea* Benth. Endemic.

Local name: Tubili (Bag.).

DERRIS OBLONGIFOLIA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 82.

Luzon (Bontoc), *Vanoverbergh* 280, 3904. In thickets and forests, altitude 1,300 to 1,600 m. Endemic.

Local name: Kabutut (Bon.).

DERRIS PHILIPPINENSIS Merr. in Philip. Journ. Sci. 5 (1910) Bot. 104.

Derris multiflora Benth. var. ? *longifolia* Benth. in Journ. Linn. Soc. Bot. 4 (1860) Suppl. 108; Vidal Phan. Cuming. Philip. (1885) 109, non *D. longifolia* Benth.

Derris multiflora Vidal Rev. Pl. Vasc. Filip. (1886) 112; Perk. Frag. Fl. Philip. (1904) 83; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 66, non Benth.

Luzon (Cagayan, Ilocos Norte, Benguet, Rizal, Laguna, Bataan, Tayabas, Camarines), *Cuming* 1162, *Loher* 5927, *Elmer* 6177, *Merrill* 1969, 5045, *Williams* 714, *F. B.* 24111 *Velasco*, 26463 *Catalan*. In thickets and forests at low and medium altitudes, ascending to 1,400 m. Endemic.

Local name: Upi (Ig.).

DERRIS POLYANTHA Perk. Frag. Fl. Philip. (1904) 83; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 103.

Luzon (Pampanga, Pangasinan, Laguna, Rizal, Batangas), *Merrill* 1457, 1366, 1692, 10599, *B. S.* 2188 *Ramos*, *F. B.* 430, 2653 *Ahern's collector*. In thickets and secondary forests at low altitudes. Endemic.

Local names: Timalang (Tag.); tugli (Tag.); tuglón (Tag.); tuglún (Tag.).

DERRIS SCANDENS (Roxb.) Benth. in Journ. Linn. Soc. Bot. 4 (1860) Suppl. 103; F.-Vill. Novis. App. (1880) 68; Vidal Sinopsis Atlas (1883) 23, *t.* 44, *f.* F., Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 112; Perk. Frag. Fl. Philip. (1904) 84; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 40, Philip. Journ. Sci. 5 (1910) Bot. 104, Fl. Manila (1912) 248, Sp. Blancoanae (1918) 186. *Dalbergia scandens* Roxb. Pl. Coromandel 2 (1798) *t.* 192.

Galedupa frutescens Blanco Fl. Filip. (1837) 562, ed. 2 (1845) 391, ed. 3, 2 (1879) 354, *t.* 232.

Deguelia timoriensis Taub. in Engl. & Prantl Nat. Pflanzenfam. 3³ (1891) 345.

Northern Luzon to Palawan and Mindanao. In thickets and secondary forests at low and medium altitudes. India to southern China through Malaya to tropical Australia.

Local names: Lapak (Bik.); malasága (Tag.).

DERRIS THYRSIFLORA Benth. in Journ. Linn. Soc. Bot. 4 (1860) Suppl. 249; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 103.

Millettia thyrsoflora Benth. in Miq. Pl. Jungh. (1852) 249.

Negros, Basilan, *Hallier*, *F. B.* 23086 *Pascual*. In thickets at low altitudes. Nicobar Islands, Malay Peninsula, Sumatra, Java.

DERRIS TRIFOLIATA Lour. Fl. Cochinch. (1790) 433; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 105, 15 (1919) 241, Fl. Manila (1912) 248, Sp. Blancoanae (1918) 185.

Robinia uliginosa Roxb. ex Willd. Sp. Pl. 3 (1800) 433.

Dalbergia heterophylla Willd. op. cit. 901.

Galedupa uliginosa Roxb. Hort. Beng. (1814) 53, Fl. Ind. ed. 2, 3 (1832) 243.

Pongamia uliginosa DC. Prodr. 2 (1825) 416.

Pterocarpus frutescens Blanco Fl. Filip. (1837) 562, ed. 2 (1845) 392, ed. 3, 2 (1879) 356, non Vell.

Derris uliginosa Benth. in Miq. Pl. Jungh. (1852) 252, Journ. Linn. Soc. Bot. 4 (1860) Suppl. 107; F.-Vill. Novis. App. (1880) 68; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 112; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 457; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 410.

Derris diadelphus Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 161, non Blanco.

Throughout the Philippines on muddy shores, along tidal streams, etc., abundant. Tropical East Africa, Asia, through Malaya to Australia and Polynesia, a strictly littoral species.

Local names: Asiasimánan (Tag.); butong (Bis.); hiñgasín (P. Bis.); hiñgasinan (P. Bis.); mañgasín (Tag.); sabuko (Bag.); silasila (Tag.); tuba-tuba (Yak.).

DOUBTFUL OR EXCLUDED SPECIES

DERRIS FERRUGINEA Benth; Ceron Cat. Pl. Herb. Manila (1892) 66.

The Philippine record was based on *Vidal 2576* from Isabela Province, Luzon; I suspect that the identification is erroneous.

DERRIS DISCOLOR Benth.; Ceron Cat. Pl. Herb. Manila (1892) 66.

The Philippine reference was based on *Vidal 2665* from Basilan. The species is an Indian one, and I suspect the Vidal specimen to have been erroneously identified.

66. EUCHRESTA Bennett

EUCHRESTA HORSFIELDII (Lesch.) Benn. Pl. Jav. Rar. (1840) 148, t. 21; Benth. in Journ. Linn. Soc. Bot. 4 (1860) Suppl. 118; Miq. Fl. Ind. Bat. 1^a (1855) 125; F.-Vill. Novis. App. (1880) 68; Ceron Cat. Pl. Herb. Manila (1892) 67; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 107.

Andira, horsfieldii Lesch. in Ann. Mus. Paris 16 (1810) 481, t. 12; DC. Prodr. 2 (1825) 476.

Northern Luzon to Mindanao. Of local occurrence on the higher mountains. India to the Riu Kiu Islands and Formosa southward to Java.

Local names: Katanda (Buk.); lagúan (Tag.); makahilab (Buk.).

67. INOCARPUS Forster

INOCARPUS EDULIS Forst. Char. Gen. (1776) 66, t. 33; F.-Vill. Novis. App. (1880) 68; Oliver in Hook. Ic. IV 9 (1889) t. 1837; Perk. Frag. Fl. Philip. (1904) 21; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 108.

Bocoa edulis Baill. Adansonia 9 (1868-70) 237.

Gajanus edulis O. Kuntze Rev. Gen. Pl. (1891) 189.

Samar, Mindanao, Sulu Archipelago, *B. S. 15398* Ramos, *Piper 112*, *F. B. 24405* Cortez & Fernandez, *Merrill 5336*. Cultivated only. Malay Archipelago and Polynesia, frequently planted.

Local name: Kayam (Sul., Mbo.).

68. PISUM Tournefort

PISUM SATIVUM Linn. Sp. Pl. (1753) 272; F.-Vill. Novis. App. (1880) 62; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 108, Fl. Manila (1912) 249.

Cultivated only, and its Philippine occurrence dependent on imported seeds. The common pea.

Local name: Chicharo (Sp.).

69. **ABRUS** Linnaeus

ABRUS LAEVIGATUS E. Mey. Comm. 1 (1835-37) 126; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 109, Fl. Manila (1912) 249.

Abrus pulchellus Wall. Cat. (1832) No. 5819 *nomen nudum*; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 175; F.-Vill. Novis. App. (1880) 62; Perk. Frag. Fl. Philip. (1904) 84; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 66.

Luzon (Abra southward to Laguna). In thickets at low and medium altitudes. Tropical and southern Africa, India, and Malaya.

Local names: Kansasága (Tag.); sága (Tag.); sagáng-kalabáu (Tag.).

ABRUS PRECATORIUS Linn. Syst. ed. 12 (1767) 472; Blanco Fl. Filip. (1837) 565, ed. 2 (1845) 394, ed. 3, 2 (1879) 361, *t.* 156; F.-Vill. Novis. App. (1880) 62; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 109; Perk. Frag. Fl. Philip. (1904) 84; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 66, 3 (1908) Bot. 410, 5 (1910) Bot. 108, Fl. Manila (1912) 249, Sp. Blancoanae (1918) 186.

Throughout the Philippines at low and medium altitudes, common in thickets. Pantropic, although probably a native of tropical Asia.

Local names: Agaion (C. Bis.); aguiangiang (Bis.); aroiangiang (Bis.); bañgati (Tag., Bik., Bis.); bugaióng (Ilk., Bon., Pang.); bugbugaióng (Ilk.); gumaiing (Bon.); gikos-gikos (Bis.); kansasága (Pamp., Tag., Bik.); kaloo (Bis.); kasasága (Tag., Pamp.); lamodiak (Bag.); lága (C. Bis.); lása (Iv.); manggadolong (Bis.); oiangia (Bis.); matang-púne (Bis.); sága (Tag.); saga-sága (Tag.); saga-mamín (Tag.).

EXCLUDED SPECIES

ABRUS FRUTICULOSUS Wall.; F.-Vill. Novis. App. (1880) 62.

70. **CLITORIA** Linnaeus

CLITORIA TERNATEA Linn. Sp. Pl. (1753) 753; DC. Prodr. 2 (1825) 233; Blanco Fl. Filip. (1837) 590, ed. 2 (1845) 412, ed. 3, 2 (1879) 391, *t.* 301; F.-Vill. Novis. App. (1880) 65; Miq. Fl. Ind. Bat. 1^a (1855) 226; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 109; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 109, Fl. Manila (1912) 245, Sp. Blancoanae (1918) 187.

Clitoria philippensis Perr. in Mém. Soc. Linn. Paris 3 (1825) 110, C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 305.

Throughout the Philippines, in thickets in the settled areas at low and medium altitudes, sometimes cultivated. An introduced plant in the Philippines. Pantropic.

Local names: Balog-balog (C. Bis.); giting-princesa (Bik.) kolokánting (Tag.); kalompági (Ilk.); pukiñgan (Tag.); samsampín (Pang.); samsampíng (Ilk.).

71. **CENTROSEMA** Benth

CENTROSEMA PLUMIERI (Turp.) Benth. in Ann. Wien. Mus. 2 (1838) 118; F.-Vill. Novis. App. (1880) 65; Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t.* 455; Usteri Beitr. Ken. Philip. Veg. (1905) 115;

Merr. in Philip. Journ. Sci. 5 (1910) Bot. 109, Fl. Manila (1912) 258.

Clitoria plumieri Turp. in Pers. Syn. 2 (1807) 303.

Bradburya plumieri O. Kuntze Rev. Gen. Pl. (1891) 164.

Luzon (Laguna, Manila), Cebu, *F. B. 26371 Catalan, B. S. 1111 Ramos, Elmer 14421*. In hedges, thickets, etc., naturalized from tropical America.

72. DUMASIA de Candolle

DUMASIA VILLOSA DC. in Ann. Sci. Nat. 1 4 (1825) 257, t. 44, Prodr. 2 (1825) 241; F.-Vill. Novis. App. (1880) 62; Ceron Cat. Pl. Herb. Manila (1892) 63; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 110.

Luzon (Abra, Kalinga, Lepanto, Bontoc, Benguet), *B. S. 26992 Ramos, 37569, 40514 Ramos & Edaña, Williams 1412, Merrill 4671, Vanoverbergh 891*. In thickets and ravines, altitude 1,200 to 1,600 m. India to southern China, Java, Madagascar, and Natal.

Local name: Upag (Klg.).

73. SHUTERIA Wight and Arnott

SHUTERIA VESTITA (Grah.) W. & A. Prodr. (1834) 207; Benth. in Miq. Pl. Jungh. (1852) 232; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 181; Rolfe in Journ. Bot. 23 (1885) 212; Vidal Rev. Pl. Vasc. Filip. (1886) 109; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 110, 354.

Glycine vestita Grah. in Wall. Cat. (1832) No. 5512, *nomen nudum*.

Luzon (Benguet, Bontoc), on open slopes and in thickets in the pine region, altitude 1,300 to 2,000 m. India to southern China.

Local names: Alitaitan (Bon.); ditidid (Ig.); táyum (Bon.).

74. GLYCINE Linnaeus

GLYCINE TOMENTOSA Benth. Fl. Austral. 2 (1864) 245; Rolfe in Journ. Bot. 23 (1885) 212; Forbes & Hemsl. in Journ. Linn. Soc. Bot. 23 (1887) 189; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 109; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 110.

Luzon (Ilocos Norte), *Cuming 1238*, apparently very rare or local as it has not been collected in the Philippines since 1840. Southern China and Australia.

EXCLUDED SPECIES

GLYCINE JAVANICA Linn.; F.-Vill. Novis. App. (1880) 62.

GLYCINE MAX (Linn.) Merr. Interpret. Herb. Amb. (1917) 274.

Phaseolus max Linn. Sp. Pl. (1753) 725.

Dolichos soja Linn. op. cit. 727.

Soja max Piper in U. S. Dept. Agr. Seed Invent. 33 (1915) 42.

Soja hispida Moench. Meth. (1794) 153.

Glycine hispida Maxim. in Bull. Acad. St. Pétersb. 18 (1873) 398.

This is the common soy bean of which large amounts are annually imported into the Philippines. It generally does not thrive in the Archipelago, and I have never seen it cultivated by the Filipinos.

75. **TERAMNUS** P. Browne

TERAMNUS ANGUSTIFOLIUS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 83.

Luzon (Bontoc), *Vanoverbergh* 716. In waste places, altitude about 1,300 m. Endemic.

TERAMNUS LABIALIS (Linn. f.) Spreng. Syst. 3 (1826) 235; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 184; F.-Vill. Novis. App. (1880) 63; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 109; Perk. Frag. Fl. Philip. (1904) 84; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 110, Fl. Manila (1912) 257.

Glycine labialis Linn. f. Suppl. (1781) 325.

Northern Luzon to Mindanao. In thickets, waste places, etc., at low and medium altitudes in the settled areas. Pantropic.

Local names: Balagun (C. Bis.); mani-manían (Tag.).

76. **ERYTHRINA** Linnaeus

ERYTHRINA FUSCA Lour. Fl. Cochinch. (1790) 427; Miq. Fl. Ind. Bat. 1¹ (1855) 208; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 113, Fl. Manila (1912) 256, Sp. Blancoanae 1918) 187.

Erythrina ovalifolia Roxb. Hort. Beng. (1814) 53, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 254; Miq. Fl. Ind. Bat. 1¹ (1855) 207; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 445; F.-Vill. Novis. App. (1880) 63; Perk. Frag. Fl. Philip. (1904) 85; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 81.

Erythrina picta Blanco Fl. Filip. (1837) 565, non Linn.

Erythrina caffra Blanco op. cit. ed. 2 (1845) 394, ed. 3, 2 (1879) 360, *t.* 326, non Thunb.

Luzon (Ilocos Norte, Union, Pangasinan, Bataan, Rizal), Mindanao (Lanao). Along streams and lakes, often in swampy places. India to Indo-China southward to Malaya and Polynesia

Local names: Anfi (Tag., Ilk.); korung-körung (Bis.); dap-dáp (Tag.); telbang (Pang.).

ERYTHRINA STIPITATA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 112.

Lubang, *Merrill* 958. In dry open places at low altitudes. Endemic.

ERYTHRINA SUBUMBRANS (Hassk.) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 113, Fl. Manila (1912) 256.

Hypaphorus subumbrans Hassk. Retzia (1855) 198; Hort. Bogor. Descr. (1858) 197.

Erythrina lithosperma Miq. Fl. Ind. Bat. 1¹ (1855) 209; F.-Vill. Novis. App. (1880) 63; Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t.* 345; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 109, Sinopsis Atlas (1883) 23, *t.* 41, *f.* A; Perk. Frag. Fl. Philip. (1904) 85, non Blume.

Northern Luzon to Mindanao. In thickets, secondary forests, etc., at low and medium altitudes; occasionally planted. Indo-China to Malaya.

Local names: Anfi (S. L. Bis.); cherving (Gad.); dádap (Bag.); dap-dap (Tag.); raráng (Bik.); sabdáng (Ig.); sabláng (Ting.); sulibang (Pamp.).

- ERYTHRINA VARIEGATA** Linn. in Stickm. Herb. Amb. (1754) 10, Amoen. Acad. 4 (1759) 122, var. **ORIENTALIS** (Linn.) Merr. Interpret. Herb. Amb. (1917) 276, Sp. Blancoanae (1918) 187.
Erythrina corallodendron Linn. var. *orientalis* Linn. Sp. Pl. (1753) 706.
Tetradapa javanorum Osbeck Dagbok Ostind. Resa (1757) 93.
Erythrina indica Lam. Encycl. 2 (1785) 391; Miq. Fl. Ind. Bat. 1^a (1855) 207; F.-Vill. Novis. App. (1880) 63; Perk. Frag. Fl. Philip. (1904) 85; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 111, Fl. Manila (1912) 256.

Erythrina carnea Blanco Fl. Filip. (1837) 564, ed. 2 (1845) 393, ed. 3, 2 (1879) 359, t. 217, non Dryand.

Throughout the Philippines along the seashore, frequently planted inland. The typical form of *E. variegata* Linn. (*E. picta* Linn.) with mottled leaves, occurs occasionally in the Philippines (Corregidor, Manila, Palawan, Mindanao) in cultivation. India to Polynesia.

Local names: Andorogat (Bik.); bagbág (Ilk.); bagbók (Ibn.); dapdap (Tag., Pamp., Bik., Bis.); dubdúb (Ilk.); kabráb (Bik.); karápdap (Tag.); kasíndak (Tag.); sabang (Bon.); sulbang (Pamp.); vuvúk (Ibn.).

77. STRONGYLODON Vogel

STRONGYLODON AGUSANENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2738.

Mindanao (Agusan), *Elmer 13461*. In forests, altitude about 225 m. Endemic.

Local name: Panidihidon (Mbo.).

STRONGYLODON CAERULEUS Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 20, Philip. Journ. Sci. 5 (1910) Bot. 115.

Luzon (Benguet), *Elmer 6097, 6438, 8908, Topping 58, Sandkuhl 277*. In forests, altitude 500 to 1,200 m. Endemic.

STRONGYLODON CRASSIFOLIUS Perk. Frag. Fl. Philip. (1904) 85; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 115.

Luzon (Bataan), *Warburg 12899*. This was apparently based on material from two different plants, at least as to the tendrils. Endemic.

STRONGYLODON ELMERI Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 20, Philip. Journ. Sci. 5 (1910) Bot. 114.

Luzon (Cagayan, Benguet, Ilocos Norte), *Elmer 6260, 8984, F. B. 16676 Bacani, B. S. 27344 Ramos, Merrill 7697*. In thickets and forests at low and medium altitudes, ascending to 1,600 m. Endemic.

Local name: Bindanugan (Ig.).

STRONGYLODON LUCIDUS (Forst. f.) Seem. Fl. Vit. (1865) 61; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 424, 5 (1910) Bot. 115.

Glycine lucida Forst. f. Prodr. (1786) 51.

Rhynchosia lucida DC. Prodr. 2 (1825) 387.

Strongylodon ruber Vog. in Linnaea 10 (1836) 585; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 446, t. 48.

Panay, Balut, *Merrill 5411, B. S. 31379 Ramos & Edaña*. In forests and thickets along streams at low and medium altitudes. Ceylon, Andaman Islands to New Guinea, Fiji, and Hawaii.

STRONGYLODON MACROBOTRYS A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 448, *t.* 49; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 66, 3 (1908) Bot. 81, 5 (1910) Bot. 114.

Strongyloдон warburgii Perk. Frag. Fl. Philip. (1904) 85.

Luzon (Cagayan, Bataan, Cavite, Laguna, Tayabas, Sorsogon), Catanduanes, Mindoro. In damp forested ravines along streams at low and medium altitudes. Endemic.

Local names: Bayou (Neg.); tayábak (Tag.).

STRONGYLODON MEGAPHYLLUS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 16.

Luzon (Rizal), *Loher 5935*. In forests. The leaves and flowers may have originated from different and unrelated plants. Endemic.

STRONGYLODON PAUCINERVIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 16.

Biliran, Samar, *B. S. 18858 McGregor, 24377 Ramos, 24798 Edaña*. In damp forests at low and medium altitudes. Endemic.

Local name: Yungod-yúgod (S. L. Bis.).

STRONGYLODON PULCHER C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 184; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 115.

Strongyloдон mindanaensis Elm. Leaf. Philip. Bot. 2 (1910) 696.

Mindanao (Zamboanga, Lanao, Davao), *Elmer 11818, Williams 2362, Clemens 415*. In damp forests along streams, altitude 80 to 1,200 m. Endemic.

Local name: Lípe (Bag.).

STRONGYLODON ZSCHOKKEI Elm. Leaf. Philip. Bot. 1 (1907) 227; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 114.

Luzon (Benguet), *Elmer 8540*. In thickets about limestone boulders and cliffs, altitude about 1,400 m; not clearly distinguishable from *S. elmeri* Merr. Endemic.

Local name: Bindanugan (Ig.).

78. MUCUNA Adanson

MUCUNA AUREA C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 183; Merr. op. cit. 5 (1910) Bot. 118.

Luzon (Benguet), *Williams 1292, B. S. 12647 Fénix*. In thickets at medium altitudes. Endemic.

Local names: Buka-bukau (Ig.); kudirau (Ig.); sabáuil-ñga-átap (Ik.).

MUCUNA COCHINCHINENSIS (Lour.) A. Chev. in Bull. Agr. Inst. Sci. Saigon 1 (1919) 91.

Marcanthus cochinchinensis Lour. Fl. Cochinch. (1790) 461.

Carpopogon niveum Roxb. Hort. Beng. (1814) 54, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 285.

Mucuna nivea DC. Prodr. 2 (1825) 406; W. & A. Prodr. (1834) 256; F.-Vill. Novis. App. (1880) 63; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 117, Sp. Blancoanae (1918) 188; Piper & Tracy in U. S. Dept. Agr. Bur. Pl. Ind. Bull. 179 (1910) 15, *t.* 4, *f.* A.

Negretia mitis Blanco Fl. Filip. (1837) 588, ed. 2 (1845) 410, ed. 3, 2 (1879) 388, t. 405bis, non Ruiz & Pav.

Mucuna lyonii Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 197, 5 (1910) Bot. 117, Fl. Manila (1912) 259.

Luzon to Negros, probably also in other islands, in cultivation only. Introduced from tropical Asia, now widely distributed in cultivation.

Local names: Kalabántos (Tag., Bis.); gatabong (Bon.); kotlabong (Bon.); kolidái (Ilk.); sabual (Pamp.); sabúil (Ilk.).

MUCUNA CURRANII Elm. Leaf. Philip. Bot. 1 (1907) 230; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 116.

Luzon (Bontoc, Benguet), *Elmer 8442, Williams 1424, Merrill 4818, 9692, 7716, B. S. 12896 Fénix, 31946 Santos*. In ravines and thickets, altitude 1,300 to 2,200 m. Endemic.

Local names: Babat (Bon.); bindaoñgan (Ig.); daunñgan (Ig.); lauilauan (Ig., Bon.); sabauil (Ilk.).

MUCUNA DEERINGIANA (Bort) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 118.

Stizolobium deeringianum Bort in U. S. Dept. Agr. Bur. Pl. Ind. Bull. 141 (1909) 31, t. 2, 3.

The velvet bean, introduced from the United States, occasional in cultivation. Cultivated in most warm countries, where native uncertain.

MUCUNA FOVEOLATA Merr. in Philip. Journ. Sci. 20 (1922) 389.

Luzon (Tayabas), Samar, *F. B. 28379 Mabesa, 21048 Sherfesse, Cenabre, & Cortez*. Along streams and borders of forests at low altitudes. Endemic.

Local name: Danipai (S. L. Bis.).

MUCUNA GIGANTEA (Willd.) DC. Prodr. 2 (1825) 405; Wight in Hook. Bot. Misc. 2 (1831) 351, t. 14; F.-Vill. Novis. App. (1880) 63; Vidal Phan. Cuming. Philip. (1885) 108, Rev. Pl. Vasc. Filip. (1886) 109; Perk. Frag. Fl. Philip. (1904) 86; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 116.

Dolichos giganteus Willd. Sp. Pl. 3 (1803) 1041.

Carpopogon giganteum Roxb. Hort. Beng. (1814) 54.

Stizolobium giganteum Spreng. Syst. 4 (1827) Cur. Post. 281.

Zoophthalmum giganteum Prain in Journ. As. Soc. Beng. 66² (1897) 68, in syn.

Northern Luzon to Mindanao, Palawan, and the Sulu Archipelago. In thickets along the seashore. India to Polynesia near the sea.

Local names: Duglo (Tag.); lípi (Bag.); lípai (Tag.); sabauil-ti-nuang (Ilk.).

MUCUNA LONGIPEDUNCULATA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 18, Philip. Journ. Sci. 5 (1910) Bot. 117.

Mucuna macmillanii Elm. Leaf. Philip. Bot. 8 (1915) 2736.

Luzon (Benguet, Laguna, Rizal, Tayabas), Biliran, Panay, Mindanao (Surigao, Bukidnon, Misamis), *Elmer 8949a, 6233, 17498, 18594, Merrill Phil. Pl. 1735, Bolster 394, B. S. 18112 Robinson, 28707 Ramos & Edaña, F. B. 2955 Ahern's collector*. In ravines and forests at medium altitudes, ascending to 1,400 m. Endemic.

Local names: Baykutkut (Tag.); bunalon (Mbo.); bunalan (Mbo.); kodirau (Ig.); kanipai (Buk.); lauilauan (Ig.).

MUCUNA MINDORENSIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 231, 5 (1910) Bot. 116.

Mucuna acuminata Merr. op. cit. 1 (1906) Suppl. 196, non Grah.

Mindoro, Panay, *McGregor* 322, 220, *Merrill* 4069, *F. B.* 6861 *Merritt*, *B. S.* 31023 *Ramos & Edaño*. In forests along rivers at low altitudes. Endemic.

MUCUNA NIGRICANS (Lour.) Steud. Nomencl. ed. 2, 2 (1841) 163; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 116, Sp. Blancoanae (1918) 187.

Citta nigricans Lour. Fl. Cochinch. (1790) 456.

Carpopogon imbricatum Roxb. Hort. Beng. (1814) 54.

Mucuna imbricata DC. Prodr. 2 (1825) 406; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 38, Philip. Journ. Sci. 1 (1906) Suppl. 67.

Negretia urens Blanco Fl. Filip. (1837) 586, ed. 2 (1845) 409, ed. 3, 2 (1879) 387, non Tussac.

Mucuna monosperma F.-Vill. Novis. App. (1880) 63, non DC.

Stizolobium imbricatum O. Kuntze Rev. Gen. Pl. (1891) 208.

Zoophthalmum nigricans Prain in Journ. As. Soc. Beng. 66² (1897) 65, in syn.

Northern Luzon (Cagayan) to Mindanao. In thickets and secondary forests at low and medium altitudes, locally abundant. India to Indo-China and probably Malaya.

Local names: Alilipai (Sul.); baluktot (Tag.); bukitkit (Tag.); bukkáu (Ilk.); danipai (S. L. Bis.); duglo (Tag.); ipal (Tag.); lipai (Tag.); nipai (Tag., Bis.); sagapok (P. Bis.).

MUCUNA PRURIENS (Linn.) DC. Prodr. 2 (1825) 405; F.-Vill. Novis. App. (1880) 63; Frag. Fl. Philip. (1904) 86; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 67, 5 (1910) Bot. 117, Fl. Manila (1912) 259, Interpret. Herb. Amb. (1917) 277, Sp. Blancoanae (1918) 188.

Dolichos pruriens Linn. in Stickm. Herb. Amb. (1754) 23, Amoen. Acad. 4 (1759) 132, Syst. ed. 10 (1759) 1162.

Stizolobium pruriens Medic. in Vorles. Churpf. Phys. Ges. 2 (1797) 399.

Carpopogon pruriens Roxb. Hort. Beng. (1814) 54.

Negretia pruriens Blanco Fl. Filip. ed. 2 (1845) 411, ed. 3, 2 (1879) 389, t. 331.

Mucuna atropurpurea F.-Vill. Novis. App. (1880) 63, non DC.

Luzon (Rizal, Laguna), Negros. In dry thickets and secondary forests at low altitudes. India to Malaya.

Local names: Hípoi (Bik.); ípe (Pamp.); lipai (Tag.); nipai (Bis., Tag.); nípoi (Bik.).

MUCUNA SAMARENSIS Merr. in Philip. Journ. Sci. 20 (1922) 390.

Samar, *B. S.* 34241 *Ramos*. In damp forests at low altitudes. Endemic.

Local name: Malanipai (S. L. Bis.).

MUCUNA SERICOPHYLLA Perk. Frag. Fl. Philip. (1904) 86; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 117.

Mucuna luzoniensis Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 196.

Luzon (Lepanto, Bontoc, Benguet, Union, Nueva Vizcaya, Nueva Ecija, Pampanga, Bataan, Laguna), Mindoro, Leyte, Mindanao, Jolo. In dry thickets at low and medium altitudes. Endemic.

Local names: Duglu (Tag.); kábit (Ilk.); nípai (Tag.); pia-pia (Sul.); sabauil-nga-átap (Ilk.); saguagil (Ig.); uauini (Is.).

EXCLUDED SPECIES

MUCUNA CAPITATA Willd.; F.-Vill. Novis. App. (1880) 63.

79. SPATHOLOBUS Hasskarl

SPATHOLOBUS APOENSIS Elm. Leaf. Philip. Bot. 2 (1910) 698.

Mindanao (Agusan, Davao), *Elmer 11795, 13300*. In forests, altitude about 1,200 m. Endemic.

Local names: Balia (Bag.); panamog (Mbo.).

SPATHOLOBUS GYROCARPUS (Wall.) Benth. in Miq. Pl. Jungh. (1852) 238; Miq. Fl. Ind. Bat. 1¹ (1855) 204; F.-Vill. Novis. App. (1880) 63; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 110; Perk. Frag. Fl. Philip. (1904) 87; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 119.

Butea gyrocarpa Wall. Cat. (1832) No. 5442, *nomen nudum*.

Spatholobus sanguineus Elm. Leaf. Philip. Bot. 8 (1919) 3087.

Luzon (Rizal, Laguna, Albay), Leyte, *Elmer 18250, 17560, 17984, Merrill 2685, Cuming 945, Wenzel 989, F. B. 464, 1149, 2957 Ahern's collector, 26840 Mabesa*. In primary forests at low and medium altitudes. Malay Peninsula.

Local names: Ipal (Tag.); ipales (Tag.).

SPATHOLOBUS PALAWANENSIS (Elm.) comb. nov.

Derris palawanensis Elm. Leaf. Philip. Bot. 5 (1913) 1800.

Derris leytensis Merr. in Philip. Journ. Sci. 9 (1914) Bot. 361.

Spatholobus philippinensis Merr. in Philip. Journ. Sci. 13 (1918) Bot. 17.

Luzon (Apayao, Laguna, Rizal, Camarines), Palawan, Leyte, Panay, *F. B. 26055, 26841 Mabesa, 21324 Foxworthy & Catalan, 21474 Alvarez, 466 Ahern's collector, 21600 Agama, B. S. 2630 Ramos, 28217 Fénix, 30947 Ramos & Edaña, Wenzel 841, Elmer 13063, 17642 (Derris merrillii Elm.)*. Along streams in primary forests at low and medium altitudes. Endemic.

80. GALACTIA P. Browne

GALACTIA TENUIFLORA (Klein) W. & A. Prodr. (1834) 206; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 192; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 119, Fl. Manila (1912) 259, Sp. Blancoanae (1918) 188.

Glycine tenuiflora Klein ex Willd. Sp. Pl. 3 (1800) 1059; DC. Prodr. 2 (1825) 241.

Dolichos repens Blanco Fl. Filip. (1837) 577, ed. 2 (1845) 402, ed. 3, 2 (1879) 373, non Linn.

Luzon (Benguet, Bulacan, Rizal, Batangas), *Merrill Sp. Blancoanae 1039, Phil. Pl. 702, B. S. 22415, 24080 Ramos, 31815 Santos, Elmer 6613*.

In thickets, sea level to an altitude of 2,000 m; rare and local. Tropical Asia and Africa through Malaya to Australia.

Local name: Kalumimitan (Ig.).

81. *DIOCLEA* Humboldt, Bonpland, and Kunth

DIOCLEA REFLEXA Hook. f. *Niger Flora* (1849) 306; Rolfe in *Journ. Bot.* 23 (1885) 212; Vidal Phan. Cuming. *Philip.* (1885) 109, Rev. Pl. Vasc. *Filip.* (1886) 110; Perk. *Frag. Fl. Philip.* (1904) 87; Merr. in *Philip. Journ. Sci.* 5 (1910) Bot. 119.

Luzon (Rizal, Laguna), Mindoro, Busuanga, Palawan, Mindanao, *Merrill 4033, 9595, Cuming 521, McGregor 227, B. S. 22257 Ramos, 36821 Ramos & Edaño*. In thickets and forests at low altitudes, chiefly along small streams. Pantropic.

DIOCLEA UMBRINA Elm. *Leaf. Philip. Bot.* 1 (1907) 224; Merr. in *Philip. Journ. Sci.* 5 (1910) Bot. 119.

Luzon (Benguet, Nueva Vizcaya, Laguna, Rizal), Samar, Panay, Leyte, *Elmer 7249, 8922, 17865, Merrill 1621, Phil. Pl. 708, B. S. 11236, 12394 McGregor, 24168 Ramos, 31387 Ramos & Edaño*. In forests at low and medium altitudes. Endemic.

Local name: Bai (Ig.).

82. *MACROPSYCHANTHUS* Harms

MACROPSYCHANTHUS FERRUGINEUS Merr. in *Philip. Journ. Sci.* 5 (1910) Bot. 121.

Mindanao (Agusan, Zamboanga, Lanao), *Clemens 419, Elmer 13993, B. S. 36747, 36921 Ramos & Edaño as Dioclea*. In forests at low and medium altitudes. Endemic.

MACROPSYCHANTHUS MINDANAENSIS Merr. in *Philip. Journ. Sci.* 5 (1910) Bot. 120.

Mindanao (Surigao, Agusan), *Elmer 11905, Bolster 330*. In forests along streams at low and medium altitudes. Endemic. The other species of the genus in New Guinea.

83. *PUERARIA* de Candolle

PUERARIA PHASEOLOIDES (Roxb.) Benth. in *Journ. Linn. Soc. Bot.* 9 (1865) 125; Baker in Hook. f. *Fl. Brit. Ind.* 2 (1876) 199; F.-Vill. *Novis. App.* (1880) 64; Merr. in *Govt. Lab. Publ. (Philip.)* 27 (1905) 39, *Philip. Journ. Sci.* 5 (1910) Bot. 123, *Fl. Manila* (1912) 254, *Sp. Blancoanae* (1918) 189.

Dolichos phaseoloides Roxb. *Fl. Ind. ed. 2, 3* (1832) 316.

Pachyrhizus teres Blanco *Fl. Filip.* (1837) 580.

Pachyrhizus montanus Blanco op. cit. ed. 2 (1845) 406, ed. 3, 2 (1879) 381, non DC.

Dioscorea bolojonica Blanco *Fl. Filip.* (1837) 800, ed. 2 (1845) 551, ed. 3, 3 (1879) 208.

Batan Islands and northern Luzon to Mindanao. In open grasslands and in thickets at low and medium altitudes. India to southern China and Malaya.

Local names: Báhai (C. Bis.); sínkamas-áso (Tag.); váai (Iv.).

PUERARIA PULCHERRIMA (Koord.) Merr. ex Koord.-Schum. Syst. Verzeich. 2 (1914) 132.

Mucuna pulcherrima Koord. in Meded. Lands Plant. 19 (1908) 440.

Pueraria warburgii Perk. Frag. Fl. Philip. (1904) 87; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 124.

Glycine warburgii Merr. in Philip. Journ. Sci. 3 (1908) Bot. 231.

Luzon (Albay, Sorsogon), Biliran, Leyte, Mindanao (Surigao, Bukidnon, Agusan, Davao), *Warburg 14664, Elmer 16724, 18336, 10655, Merrill 5430, Wenzel 210, 1864, Williams 2953, B. S. 18869 McGregor, 15208 Ramos, 38454 Ramos & Edaño, 15856 Fénix*. In thickets and forests at low altitudes. Celebes.

Local names: Alibun̄gog (Buk.); totoi (Mbo.).

PUERARIA TETRAGONA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 122.

Palawan, *B. S. 295 Bermejos*. In old clearings at low altitudes. Endemic.

PUERARIA THUNBERGIANA (S. & Z.) Benth. in Journ. Linn. Soc. Bot. 9 (1865) 122; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 410, 5 (1910) 123, Fl. Manila (1912) 254.

Dolichos hirsutus Thunb. in Trans. Linn. Soc. 2 (1794) 339, non *Pueraria hirsuta* Kurz.

Pachyrhizus thunbergianus S. & Z. Fl. Jap. Fam. Nat. 2 (1846) 113.

Neustanthus chinensis Benth. Fl. Hongk. (1861) 86.

Batan Islands, Luzon (Benguet, Tayabas, Rizal), Biliran, Banton, Negros, Mindanao (Agusan), *B. S. 31804 Santos, Elmer 6600, 10310, 13518, Merrill Phil. Pl. 277, B. S. 28070 Merrill, 18522 McGregor*. In open grasslands and thickets at low and medium altitudes, in Benguet ascending to 2,000 m. India to Japan southward to Malaya.

Local names: Báai (Ig.); tahaunon (Mbo.).

84. CANAVALIA de Candolle

CANAVALIA ENSIFORMIS (Linn.) DC. Prodr. 2 (1825) 404; F.-Vill. Novis. App. (1880) 64; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 125 p.p.

Dolichos ensiformis Linn. Sp. Pl. (1753) 725.

Occasionally planted, probably from seeds of American origin, that is, a recent introduction in the Philippines. A native of the West Indies. The jack bean.

CANAVALIA GLADIATA (Jacq.) DC. Prodr. 2 (1825) 404; Blanco Fl. Filip. ed. 2 (1845) 403, ed 3, 2 (1879) 376, *t. 449*; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 126, Fl. Manila (1912) 258, Sp. Blancoanae (1918) 189; Dunn in Kew Bull. (1922) 134.

Dolichos gladiatus Jacq. Coll. 2 (1788) 276.

Dolichos ensiformis Blanco Fl. Filip. (1837) 577, non DC.

Occasionally planted, but nowhere spontaneous. A native of tropical America, now pantropic.

Local names: Hábas (Tag.); magtambokau (Bis.); patáning-españa (Tag.).

CANAVALIA LUZONICA Piper in Proc. Biol. Soc. Wash. 30 (1917) 177; Dunn in Kew Bull. (1922) 136.

Canavalia ensiformis Perk. Frag. Fl. Philip. (1904) 88; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 125, pro majore parte, Fl. Manila (1912) 258, non DC.

Luzon (Cagayan to Batangas, Laguna, Camarines); Lubang. Common in dry thickets at low and medium altitudes, in Bontoc ascending to 1,400 m, well represented by *Merrill Phil. Pl. 90, 1596, 2050*. Endemic.

Local names: Babugíng (Ilk.); hábas-kabáyo (Tag.); kamkampilán (Ilk.); malasínkamas (Tag.); marútong (Tag.); riskapién (Ibn.); sabil-dokon (Tag.); sola (Pang.).

CANAVALIA MACROBOTRYS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 13.

Samar, Panay, *B. S. 17517 Ramos, 31294 Ramos & Edaño*. In forests or thickets at low altitudes. Endemic.

CANAVALIA MICROCARPA (DC.) Piper in Proc. Biol. Soc. Wash. 30 (Oct. 23, 1917) 177; Merr. Interpret. Herb. Amb. (Nov., 1917) 280.

Lablab microcarpus DC. Prodr. 2 (1825) 402.

Canavalia turgida Grah. in Wall. Cat. (1832) No. 5534, *nomen nudum*; Miq. Fl. Ind. Bat. 1¹ (1855) 215; Prain in Journ. As. Soc. Beng. 66² (1897) 417; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 81, 410, 5 (1910) Bot. 124, Fl. Manila (1912) 257; Dunn in Kew Bull. (1922) 139.

Canavalia virosa Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 319, non W. & A.

Canavalia obtusifolia Prain in Journ. As. Soc. Beng. 66² (1897) 63; Perk. Frag. Fl. Philip. (1904) 88; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 67, non DC.

Throughout the Philippines in thickets back of the beach, and along the margins of some lakes (Lanao, Taal) up to an altitude of about 600 m. India to southern China, Formosa, and Malaya.

I do not agree with Dunn* that *Cacara litorea* Rumph., which is the basis of *Lablab microcarpa* DC., represents *Canavalia rosea* DC.=*C. obtusifolia* DC. Rumphius's figure is unmistakably a representation of *Canavalia turgida* Grah.

Local names: Bukáu (Ilk.); dalakorak (Tag.); daluydoi (P. Bis.); danglin (Tag.); dugho (Pamp.); malamátáng-pusa (Pamp.); palang-pálang (Bis.); pia-pia (Sul.).

CANAVALIA ROSEA (Sw.) DC. Prodr. 2 (1825) 404; Dunn in Kew Bull. (1922) 138.

Dolichos roseus Sw. Fl. Ind. Occ. (1806) 1243.

Canavalia obtusifolia F.-Vill. Novis. App. (1880) 64; Miq. Fl. Ind. Bat. 1¹ (1855) 215, non DC. ?

Dolichos acinaciformis Blanco Fl. Filip. (1837) 578, non Jacq.

* Kew Bull. (1922) 139.

Canavalia ensiformis Blanco Fl. Filip. ed. 2 (1845) 404, ed. 3, 2 (1879) 377, non DC.

Canavalia lineata Merr. in Philip. Journ. Sci. 3 (1908) Bot. 410, 5 (1910) Bot. 125, Fl. Manila (1912) 257, Sp. Blancoanae (1918) 187, non DC.

Batan Islands and northern Luzon to Mindanao and Palawan, trailing on sandy seashores. Pantropic.

Local names: Lagaylai (P. Bis.); magtambokau (S. L. Bis.); patáning-dágat (Tag.).

85. LUZONIA Elmer

LUZONIA PURPUREA Elm. Leaf. Philip. Bot. 1 (1907) 220; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 120, 10 (1915) Bot. 17.

Luzon (Benguet, Tayabas, Bataan), Leyte, *Elmer 9013, F. B. 3050 Borden, Wenzel 1595, Merrill 9685*. In forests at low and medium altitudes, in Benguet ascending to 1,400 m. A monotypic endemic genus.

Local name: Baloktót (Tag.).

86. CAJANUS de Candolle

CAJANUS CAJAN (Linn.) Millsp. in Field Columb. Mus. Bot. 2 (1900) 53; Merr. Fl. Manila (1912) 255, Interpret. Herb. Amb. (1917) 282, Sp. Blancoanae (1918) 190.

Cytisus cajan Linn. Sp. Pl. (1753) 739; Blanco Fl. Filip. (1837) 597.

Cytisus pseudo-cajan Jacq. Hort. Vind. 2 (1772) 54, t. 119.

Cajan inodorum Medic. in Vorles. Churpf. Phys. Ges. 2 (1787) 363.

Cajanus bicolor DC. Hort. Monsp. (1813) 85; Blanco Fl. Filip. ed. 2 (1845) 416, ed. 3, 2 (1879) 396, t. 167.

Cajanus indicus Spreng. Syst. 3 (1826) 248; Hook. f. in Curtis's Bot. Mag. III 35 (1879) t. 6440; F.-Vill. Novis. App. (1880) 66; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 110; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 82, 5 (1910) 126, 354.

Throughout the Philippines in the settled areas, cultivated, semicultivated, and in some regions spontaneous, occurring from sea level to 2,400 m. Probably of prehistoric introduction from tropical Asia or Malaya, now pantropic. The pigeon pea.

Local names: Gablos (Tag.); kadiós (Mang., Tag., P. Bis.); kagyós (Tag.); kagyús (Tag.); kaldís (Ig., Ilk.); kalios (Tag.); kardís (Ibn., Ilk., Ig.); kidís (Ilk., Bon.); kudís (Ig., If.); tabios (Bik., C. Bis.).

87. DUNBARIA Wight and Arnott

DUNBARIA CUMINGIANA Benth. in Miq. Pl. Jungh. (1852) 242; Miq. Fl. Ind. Bat. 1¹ (1855) 177; F.-Vill. Novis. App. (1880) 66; Vidal Phan. Cuming. Philip. (1886) 109, Rev. Pl. Vasc. Filip. (1886) 110; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 127.

Luzon (Benguet, Union, Nueva Vizcaya, Bataan, Rizal, Laguna), Leyte. In thickets at low and medium altitudes; not common. Endemic.

Local name: Bangbangnáu (Ilk.).

DUNBARIA MERRILLII Elm. Leaf. Philip. Bot. 1 (1907) 225; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 127.

Luzon (Cagayan, Benguet, Ilocos Norte, Lepanto, Pampanga), *Elmer* 8502, *B. S.* 7872, 7411, 27432 *Ramos*, *Bona* 425. In thickets at medium altitudes. Endemic.

Local names: Kalat (Ig.); marapatáni (Ilk.).

DUNBARIA ROTUNDIFOLIA (Lour.) Merr. in Philip. Journ. Sci. 15 (1919) 242.

Indigofera rotundifolia Lour. Fl. Cochinch. (1790) 458.

Dolichos punctatus W. & A. Prodr. (1834) 247.

Dolichos conspersus Grah. in Wall. Cat. (1832) No. 5542, *nomen nudum*.

Dunbaria punctata Benth. in Miq. Pl. Jungh. (1852) 242; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 235, Fl. Manila (1912) 254.

Dunbaria conspersa Benth. l. c.

Luzon (Ilocos Norte, Union, Rizal), *Merrill* 8039, *Phil. Pl.* 433, *Lete* 265, *B. S.* 27304 *Ramos*. In open grasslands, borders of thickets, etc., at low altitudes. India to China southward to tropical Australia.

88. CANTHAROSPERMUM Wight and Arnott

(*Atylosia* Wight and Arnott)

CANTHAROSPERMUM SCARABAEOIDES (Linn.) Baill. in Bull. Soc. Linn. Paris 1 (1883) 384 (*scarabaeoideum*); Merr. in Philip. Journ. Sci. 5 (1910) Bot. 128, Fl. Manila (1912) 128.

Dolichos scarabaeoides Linn. Sp. Pl. (1753) 726.

Rhynchosia scarabaeoides DC. Prodr. 2 (1825) 387.

Atylosia scarabaeoides Benth. in Miq. Pl. Jungh. (1852) 245; Miq. Fl. Ind. Bat. 1¹ (1855) 173; F.-Vill. Novis. App. (1880) 66; Vidal Phan. Cuming. Philip. (1885) 109; Perk. Frag. Fl. Philip. (1904) 88.

Northern Luzon to Mindanao. In open grasslands at low and medium altitudes. India to the Mascarene Islands, southern China, Malaya, and the Marianne Islands.

CANTHAROSPERMUM VOLUBILE (Blanco) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 127, Fl. Manila (1912) 127, Sp. Blancoanae (1918) 190.

Cytisus volubilis Blanco Fl. Filip. (1837) 599.

Cajanus volubilis Blanco Fl. Filip. ed. 2 (1845) 417, ed. 3, 2 (1879) 398.

Dunbaria horsfieldii Miq. Fl. Ind. Bat. 1¹ (1855) 179.

Atylosia mollis F.-Vill. Novis. App. (1880) 66; Vidal Sinopsis Atlas (1883) 23, t. 41, f. E, Rev. Pl. Vasc. Filip. (1886) 110, Phan. Cuming. Philip. (1885) 109; Perk. Frag. Fl. Philip. (1904) 88, non Benth.

Dolichos crassus Grah. in Wall. Cat. (1832) No. 5563, *nomen nudum*.

Atylosia crassa Prain in Journ. As. Soc. Beng. 66² (1897) 45.

Luzon (Lepanto, Union, Rizal, Nueva Vizcaya), Sulu Archipelago, *Merrill* 5399, *Sp. Blancoanae* 142, *Phil. Pl.* 15, *Elmer* 5612. In thickets at low and medium altitudes. Malay Peninsula and Archipelago.

89. RHYNCHOSIA Loureiro

RHYNCHOSIA CALOSPERMA Warb. in Engl. Bot. Jahrb. 12 (1891) 314; Perk. Frag. Fl. Philip. (1904) 88; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 128.

Luzon (Pampanga), *Merrill 1443*. In thickets at low altitudes, apparently very rare or local. New Guinea, Key Islands, Bismarck Archipelago. Local name: Balabalatúnġan (Pamp.).

RHYNCHOSIA MINIMA (Linn.) DC. Prodr. 2 (1825) 385; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 223.

Dolichos minimus Linn. Sp. Pl. (1753) 726.

Luzon (Ilocos Norte), *B. S. 27137 Ramos*. In open grasslands at low altitudes. Pantropic.

RHYNCHOSIA VOLUBILIS Lour. Fl. Cochinch. (1790) 460; DC. Prodr. 2 (1825) 385; Hemsl. in Journ. Linn. Soc. Bot. 23 (1887) 196; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 82.

Luzon (Bontoc, Benguet), *B. S. 31805 Santos, Vanoverbergh 654*. In open grasslands, altitude 1,400 to 2,000 m. Japan to southern China and Formosa.

Local name: Batung (Ig.).

90. ERIOSEMA Desvaux

ERIOSEMA CHINENSE Vog. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 31; F.-Vill. Novis. App. (1880) 66; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 111; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 129.

Dolichos biflorus Lour. Fl. Cochinch. (1790) 441, non Linn.

Luzon (Cagayan, Isabela, Bontoc, Lepanto, Benguet, Nueva Vizcaya), Semirara, Culion, Mindanao (Bukidnon). In open grasslands chiefly at medium altitudes, ascending to 2,000 m; occasionally at sea level (Semirara). India to China through Malaya to tropical Australia.

Local names: Katil (Ig.); kitkitil (Bon.); kutil (Ilk.); okun (Ig.).

91. FLEMINGIA Roxburgh

FLEMINGIA CUMINGIANA Benth. in Miq. Pl. Jungh. (1852) 245; Miq. Fl. Ind. Bat. 1¹ (1855) 67; F.-Vill. Novis. App. (1880) 67; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 130, 354, Fl. Manila (1912) 253.

Luzon (Abra, Benguet, Pangasinan, Zambales, Bulacan, Bataan, Rizal). In thickets at low and medium altitudes; occasional and scarcely distinct from *F. macrophylla* O. Kuntze. Endemic.

Local name: Kopkopéyes-a-bálang (Ilk.).

FLEMINGIA INVOLUCRATA (Wall.) Benth. in Miq. Pl. Jungh. (1851) 246; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 229; F.-Vill. Novis. App. (1880) 67.

Lespedeza involucrata Wall. Cat. (1832) No. 5742, *nomen nudum*.

Lepidocoma trifoliatum Jungh. Reise (1845) 338, *nomen nudum*.

Culion, *B. S. 41326 Ramos*. In open places at low altitudes. India to Java and tropical Australia.

FLEMINGIA LINEATA (Linn.) Roxb. Hort. Beng. (1814) 56, Fl. Ind. ed. 2, 3 (1832) 341; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 228; F.-Vill. Novis. App. (1880) 67; Usteri Beitr. Ken. Philip. Veg. (1905) 116; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 267, 5 (1910) Bot. 129, Sp. Blancoanae (1918) 191.

Hedysarum lineatum Linn. Syst. ed. 10 (1759) 1170.

Flemingia blancoana Llanos Frag. Pl. Filip. (1851) 80; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 62.

Luzon (Bulacan, Rizal), *Merrill Sp. Blancoanae* 699, 552. In open grasslands at low altitudes. India to northern Australia.

FLEMINGIA MACROPHYLLA (Willd.) O. Kuntze ex Prain in Journ. As. Soc. Beng. 66² (1897) 440; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 130.

Crotalaria macrophylla Willd. Sp. Pl. 3 (1800) 982.

Flemingia congesta Roxb. ex Ait. Hort. Kew. ed. 2, 4 (1812) 349; F.-Vill. Novis. App. (1880) 67; Miq. Fl. Ind. Bat. 1¹ (1855) 164; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 111; Perk. Frag. Fl. Philip. (1904) 89.

Rhynchosia sericea Vidal Sinopsis Atlas (1883) 23, t. 40, f. D; F.-Vill. Novis. App. (1880) 67, non Span.

Moghania macrophylla O. Kuntze Rev. Gen. Pl. (1891) 199.

Northern Luzon to Palawan and Mindanao. Occasional in thickets at low and medium altitudes. India to southern China and Malaya.

Local names: Malabalatóng (Pamp.); payangka (Ig.).

FLEMINGIA PHILIPPINENSIS Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 103; Merr. op. cit. 5 (1910) Bot. 130.

Luzon (Lepanto, Bontoc), *Merrill* 4460, *Vanoverbergh* 3850, *F. B.* 16541 *Curran & Merritt*. On open grassy slopes at low altitudes. Southern China.

FLEMINGIA STROBILIFERA (Linn.) R. Br. in Ait. Hort. Kew. ed. 2, 4 (1812) 350; DC. Prodr. 2 (1825) 351; Miq. Fl. Ind. Bat. 1¹ (1855) 161; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 227; Llanos Frag. Pl. Filip. (1851) 82; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 63; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 454; F.-Vill. Novis. App. (1880) 67; Vidal Sinopsis Atlas (1883) 23, t. 40, f. E, Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 111; Perk. Frag. Fl. Philip. (1904) 89; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 129, Fl. Manila (1912) 253, Sp. Blancoanae (1918) 190.

Hedysarum strobiliferum Linn. Sp. Pl. (1753) 764.

Throughout the Philippines in the settled areas, in open dry waste places, locally very abundant; probably introduced. India to Malaya, introduced in Mauritius and the West Indies.

Local names: Adoteid (Ig.); gangan (S. L. Bis.); kaliakai (Chab.); kopa-kópa (Pang.); kopkopéyes (Ilk.); kupau-kúpau (Sbl.); pakáyan (Pamp.); panapanaláhan (Tag.); panapanaráhan (Tag.); paking (Pamp.); payang-páyang (Tag.); pirágan (Sul.); tabang-bayáuak (Tag.).

92. PHASEOLUS Tournefort

PHASEOLUS ADENANTHUS G. W. F. Mey. Prim. Fl. Esseq. (1818) 239; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 200; Perk. Frag. Fl. Philip. (1904) 89; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 132, Fl. Manila (1912) 261.

Phaseolus rostratus Wall. Pl. As. Rar. 1 (1830) 50, t. 63; Usteri Beitr. Ken. Philip. Veg. (1905) 116.

Northern Luzon (Cagayan) to Mindanao. In thickets bordering swamps, streams, etc., at low and medium altitudes. Pantropic.

Local names: Bátong-ásò (Tag.); patáni-bákir (Ilk.); sabauil-átap (Ilk.).

PHASEOLUS AUREUS Roxb. Hort. Beng. (1814) 55, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 297; Merr. Interpret. Herb. Amb. (1917) 283, Sp. Blancoanae (1918) 191.

Phaseolus mungo Blanco Fl. Filip. (1837) 573, ed. 2 (1845) 400, ed. 3, 2 (1879) 370; F.-Vill. Novis. App. (1880) 65; Perk. Frag. Fl. Philip. (1904) 89, non Linn.

Phaseolus radiatus Merr. in Philip. Journ. Sci. 5 (1910) Bot. 132, Fl. Manila (1912) 262; non Linn.

Phaseolus mungo Linn. var. *radiatus* Baker; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 110.

Cultivated throughout the Philippines, but not a native of the Archipelago and scarcely naturalized. India to China and Malaya, in cultivation.

Local names: Balátong (Tag., If., Ibn., Ilk.); múngeo (Tag., Bis.); múngeo (Tag.).

PHASEOLUS CALCARATUS Roxb. Hort. Beng. (1814) 54, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 289; F.-Vill. Novis. App. (1880) 65; Ceron Cat. Pl. Herb. Manila (1892) 64; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 132, Fl. Manila (1912) 261.

Vigna luteola Merr. in Philip. Journ. Sci. 3 (1908) Bot. 411, non Benth.

Babuyan Islands and northern Luzon to Palawan and Mindanao. In open grasslands and thickets; some forms cultivated. India to Malaya.

Local names: Anípai (S. L. Bis.); batung-amú (Sul.); kapilan (Tag.); kilkilang (Bon.); linai (Pang.); mangulási (Buk.); pagsei (Bon.); paksai (Bon.); tauhúri (Lan.).

PHASEOLUS LATHYROIDES Linn. Sp. Pl. ed. 2 (1763) 1018; Merr. Fl. Manila (1912) 260.

Phaseolus semierectus Linn. Mant. 1 (1767) 100; Miq. Fl. Ind. Bat. 1¹ (1855) 201; Baker in Hook. f. Fl. Brit. Ind. 2 (1870) 201; Perk. Frag. Fl. Philip. (1904) 89; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 132.

Common in open grasslands about Manila, introduced from tropical America. A pantropic weed.

PHASEOLUS LUNATUS Linn. Sp. Pl. (1753) 724; Blanco Fl. Filip. (1837) 573, ed. 2 (1845) 400, ed. 3, 2 (1879) 370, t. 352; F.-Vill. Novis. App. (1880) 64; Miq. Fl. Ind. Bat. 1¹ (1855) 194; Perk. Frag. Fl. Philip. (1904) 89; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 32, Philip. Journ. Sci. 5 (1910) Bot. 354, Fl. Manila (1912) 261, Sp. Blancoanae (1918) 191.

Phaseolus inamoenus Blanco Fl. Filip. (1837) 571, ed. 2 (1845) 399, ed. 3, 2 (1879) 368, non ? Linn.

Phaseolus ilocanus Blanco Fl. Filip. (1837) 572.

Phaseolus tunkinensis Lour. Fl. Cochinch. (1790) 435; Blanco Fl. Filip. ed. 2 (1845) 399, ed. 3, 2 (1879) 369, *t.* 369.

Phaseolus vexillatus Blanco Fl. Filip. (1837) 574, non Linn.

Phaseolus vulgaris Blanco Fl. Filip. ed. 2 (1845) 401, ed. 3, 2 (1879) 371, non Linn.

The lima bean. Introduced from tropical America, now thoroughly naturalized and common in thickets at low and medium altitudes, ascending to 2,000 m; some forms cultivated. Pantropic.

Local names: Bulai-patáni (Tag.); buri (Bag.); buriñgi (Tag.); butiñgi (Tag.); gulipatán (Ibn.); haba (Sp.); habichuela (Sp.); kilkilang (Bon.); kopani (Bon.); kutakút (Bon.); palpalái (Ilk.); pardá (Ilk.); patáni (Tag., Bik., Bis., Ilk.); perkoles (Ilk.); puida (Ig.); zabáche (Sp.).

PHASEOLUS MINIMUS Roxb. Fl. Ind. ed. 2, 3 (1832) 290; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 132, Fl. Manila (1912) 261.

Northern Luzon (Cagayan) to Mindanao. In open grasslands at low and medium altitudes; widely scattered. Southern China.

PHASEOLUS SUBLOBATUS Roxb. Hort. Beng. (1914) 54, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 288; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 133.

Phaseolus trinervius Heyne in Wall. Cat. (1832) No. 5603; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 203; F.-Vill. Novis. App. (1880) 65.

Luzon (Bontoc, Rizal, Laguna), Mindanao. In grasslands, waste places, etc., occasional; sometimes planted. India to Malaya.

Local names: Karatan (Bag.); moñgos-ihálas (C. Bis.).

PHASEOLUS VULGARIS Linn. Sp. Pl. (1753) 723; F.-Vill. Novis. App. (1880) 64; Merr. Fl. Manila (1912) 261.

Cultivated locally, various forms; in the Mountain Province, occasionally subspontaneous; cultivated in all warm countries. The common bean.

Local names: Habichuéla (Sp.); mula (Bon.); birinñgi (Tag.); butiñgi (Tag.).

DOUBTFUL SPECIES

PHASEOLUS RICCARDIANUS Ten.; Usteri Beitr. Ken. Philip. Veg. (1905) 116.

The Philippine record is based on a Negros specimen collected by Usteri. I have seen no material representing the species.

93. VIGNA Savi

VIGNA LUTEOLA (Jacq.) Benth. in Thwaites Enum. Pl. Ceyl. (1859) 90; Mart. Fl. Braz. 15 (1859-62) 194, *t.* 50, *f.* 2; Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 205; Ceron Cat. Pl. Herb. Manila (1912) 64; Perk. Frag. Fl. Philip. (1904) 89; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 134.

Dolichos luteolus Jacq. Hort. Vind. 1 (1770) 39, *t.* 90.

Mindanao (Lanao, Cotabato), *Clemens 209, F. B. 3951 Hutchinson*. In thickets or grasslands. Pantropic.

- VIGNA MARINA** (Burm.) Merr. Interpret. Herb. Amb. (1917) 285.
Phaseolus marinus Burm. Index Universalis Herb. Amb. 7 (1755) 17.
Dolichos luteus Sw. Prodr. (1788) 105.
Vigna lutea A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 452;
 Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 205; Perk. Frag. Fl. Philip.
 (1904) 89; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 67, 3 (1908)
 81, 5 (1910) Bot. 133, Fl. Manila (1912) 262.
Vigna retusa Walp. Repert. 1 (1842) 778; Prain in Journ. As. Soc.
 Beng. 66² (1897) 51.
Dolichos repens Linn. Sp. Jam. Pugillus (1759) 19, Amoen. Acad. 5
 (1760) 402.
Vigna repens O. Kuntze Rev. Gen. Pl. (1891) 212, non Baker.

Throughout the Philippines along the seashore. A pantropic strand plant.

- VIGNA PILOSA** (Roxb.) Baker in Hook. f. Fl. Brit. Ind. 2 (1876) 207;
 Ceron Cat. Pl. Herb. Manila (1892) 64; Perk. Frag. Fl. Philip.
 (1904) 89; Usteri Beitr. Ken. Philip. Veg. (1905) 116; Merr. in
 Govt. Lab. Publ. (Philip.) 35 (1906) 22, Philip. Journ. Sci. 5
 (1910) Bot. 134, Fl. Manila (1912) 263.

Luzon (Ifugao, Nueva Vizcaya, Rizal, Laguna, Batangas). In dry thickets at low altitudes. India to Formosa.

- VIGNA SINENSIS** (Linn.) Savi ex Hassk. Cat. Hort. Bogor. (1844) 279;
 Endl. ex Hassk. Pl. Jav. Rar. (1848) 386; Merr. in Philip. Journ.
 Sci. 5 (1910) Bot. 133, Interpret. Herb. Amb. (1917) 284, Sp. Blan-
 coanae (1918) 192; Naves in Blanco Fl. Filip. ed. 3 (1877-83)
 t. 285.

Dolichos sinensis Linn. Cent. Pl. 2 (1756) 28, Amoen. Acad. 4 (1759)
 132, 326.

Dolichos sesquipedalis Linn. Sp. Pl. ed. 2 (1763) 1019; Blanco Fl.
 Filip. ed. 2 (1845) 402, ed. 3, 2 (1879) 375, t. 286.

Vigna sesquipedalis Fruw. Unbau Huelsenfrucht. (1898) 254; Merr.
 Fl. Manila (1912) 262.

Phaseolus cylindricus Linn. Amoen. Acad. 4 (1759) 132.

Vigna cylindrica Skeels in U. S. Dept. Agr. Bur. Pl. Ind. Bull. 282
 (1913) 32; Merr. Interpret. Herb. Amb. (1918) 284, Sp. Blancoanae
 (1918) 192.

Dolichos catjang Burm. f. Fl. Ind. (1768) 161; Linn. Mant. 2 (1771)
 269.

Vigna catjang Walp. in Linnaea 13 (1839) 533; Miq. Fl. Ind. Bat.
 1¹ (1855) 188; F.-Vill. Novis. App. (1880) 65.

Dolichos echinulatus Blanco Fl. Filip. ed. 2 (1845) 401, ed. 3, 2
 (1879) 373.

Phaseolus caracalla Blanco Fl. Filip. (1837) 575, ed. 2 (1845) 401, ed.
 3, 2 (1879) 372, F.-Vill. Novis. App. (1880) 65, non Linn.

Cultivated in various parts of the Philippines, variable in its fruit characters. The yard-long bean (*V. sesquipedalis* Fruw.), the cowpea (*V. sinensis* Savi), and the catjang (*V. cylindrica* Skeels) all occur in the Philippines. Cultivated in all warm countries, native of tropical Asia.

Local names: Antá (Ibn.); balatóng (Bis., Tag.); batóng (Bon.); karakála (Tag.); hamtak (Bik., Bis.); kauat (If.); kibal (Tag.); laston (Bis.); otóng (Ilk., Bon.); sitau (Tag.).

EXCLUDED SPECIES

VIGNA REPENS Baker; F.-Vill. Novis. App. (1880) 65.

VIGNA VEXILLATA Rich.; Perk. Frag. Fl. Philip. (1904).

This is reported from Mindanao, collected by Warburg. I do not know the species as a Philippine one.

94. *PACHYRRHIZUS* Richard

PACHYRRHIZUS EROSUS (Linn.) Urb. Symb. Antill. 4 (1905) 311; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 135, Fl. Manila (1912) 263, Sp. Blancoanae (1918) 193.

Dolichos erosus Linn. Sp. Pl. (1753) 726.

Dolichos bulbosus Linn. op. cit. ed. 2 (1763) 1021.

Pachyrrhizus angulatus Rich. ex DC. Prodr. 2 (1825) 402, Blanco Fl. Filip. ed. 2 (1845) 405, ed. 3, 2 (1879) 380, *t.* 249; Miq. Fl. Ind. Bat. 1^a (1855) 191; Oliver in Hook. Ic. III 9 (1889) *t.* 1842; F.-Vill. Novis. App. (1880) 65; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 110.

Pachyrrhizus jicamas Blanco Fl. Filip. (1837) 579.

Pachyrrhizus bulbosus Kurz in Journ. As. Soc. Beng. 45² (1876) 246; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 67.

Cacara erosa O. Kuntze Rev. Gen. Pl. (1891) 165.

In thickets, hedges, etc., throughout the settled areas of the Philippines at low and medium altitudes; sometimes planted. The yam bean, a native of tropical America, now pantropic.

Local names: Hinkamás (Tag.); kamáh (Sbl.); kamás (Ilk.); lakamás (Pang.); sikamás (Pamp.).

95. *DOLICHOS* Linnaeus

DOLICHOS FALCATUS Klein in Willd. Sp. Pl. 3 (1800) 1047; DC. Prodr. 2 (1825) 398; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 453; F.-Vill. Novis. App. (1880) 66; Ceron Cat. Pl. Herb. Manila (1892) 64; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 82, 5 (1910) Bot. 135, Fl. Manila (1912) 264, Sp. Blancoanae (1918) 193.

Dolichos trilobus Blanco Fl. Filip. ed. 2 (1845) 403, ed. 3, 2 (1879) 375, Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 39, non Linn.

Luzon (Ilocos Norte to Batangas), Cebu, Leyte. In thickets at low altitudes. India and Ceylon.

Local names: Gokot-máya (C. Bis.); paiap-gúbat (Tag.).

DOLICHOS LABLAB Linn. Sp. Pl. (1753) 725; F.-Vill. Novis. App. (1880) 65; Perk. Frag. Fl. Philip. (1904) 90; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 135, Fl. Manila (1912) 264, Sp. Blancoanae (1918) 193.

Lablab vulgaris Savi Diss. (1821) 19; DC. Prodr. 2 (1825) 401; Wight in Hook. Bot. Miscel. 2 (1831) 352, *t.* 15, Miq. Fl. Ind. Bat. 1^a (1855) 189.

Glycine lucida Blanco Fl. Filip. (1837) 578, non Forst.

Lablab cultratus DC. Prodr. 2 (1825) 402; Blanco Fl. Filip. ed. 2 (1845) 405, ed. 3, 2 (1879) 379, *t.* 292.

Throughout the Philippines in the settled areas, commonly cultivated and semicultivated, in some regions naturalized. Pantropic in cultivation, a native of the Old World and an introduced plant in the Philippines.

Local names: Báglaui (C. Bis.); bátau (Tag., Bik., P. Bis.); búlai (Tag.); itab (If., Bon.); pardá (Ilk.); parda-átap (Ilk.); sibáchi (Tag.).

DOLICHOS UNIFLORUS Lam. Encycl. 2 (1786) 299; DC. Prodr. 2 (1825) 498; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 135.

Luzon (Rizal), *Cuzner 29*. In old rice fields at low altitudes. Tropical Asia.

96. PSOPHOCARPUS Necker

PSOPHOCARPUS TETRAGONOLOBUS (Linn.) DC. Prodr. 2 (1825) 403; Miq. Fl. Ind. Bat. 1¹ (1855) 181; F.-Vill. Novis. App. (1880) 66; Vidal Phan. Cuming. Philip. (1885) 109, Rev. Pl. Vasc. Filip. (1886) 110; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 136, Fl. Manila (1912) 264.

Dolichos tetragonolobus Linn. Sp. Pl. ed. 2 (1763) 1020; Blanco Fl. Filip. (1837) 576, ed. 2 (1845) 402, ed. 3, 2 (1879) 374, t. 293.

Botor tetragonoloba O. Kuntze Rev. Gen. Pl. (1891) 162.

Cultivated, semicultivated, and occasionally spontaneous or subspontaneous in most parts of the Philippines at low and medium altitudes; introduced. India to Malaya in cultivation. The asparagus bean.

Local names: Amalé (Ibn.); batung-baimbing (Sul.); cigarillas (Pang., Tag.); bulígan (If., Bon.); beyed (Bon.); kalamismis (Tag.); kamaluson (Bis.); segadilla (P. Bis.); sererélla (P. Bis.); palag (Ilk.); palam (Ilk.); parupagulung (Bik.).

EXCLUDED SPECIES

PSOPHOCARPUS PALUSTRIS Desv.; F.-Vill. Novis. App. (1880) 66.

EXCLUDED GENERA

ACROCARPUS FRAXINIFOLIUS Wight; F.-Vill. Novis. App. (1880) 74.

CICER ARIETINUM Linn.; F.-Vill. op. cit. 62.

CYTISUS PHILIPPINENSIS Hort. et **PHILIPPENSIS** Hort. ex Lindl. in Gard. Chron. (1841) 365, sphalm.=*C. philippi* Lindl.=*C. canariensis* Steud.

DIALUM LAURINUM Baker; F.-Vill. op. cit. 351.

LUPINUS INTEGRIFOLIUS DC.; Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 102.

MECOPUS NIDULANS Benn.; F.-Vill. Novis. App. (1880) 61.

PAROCHETUS COMMUNIS Ham.; F.-Vill. op. cit. 58.

HAEMATOKYLON CAMPECHIANUM Linn.

A recently introduced species cultivated in Manila and at Los Baños.

TRIFOLIUM HYBRIDUM Linn.

Trifolium hybridum Linn., alsike clover; *T. incarnatum* Linn., crimson clover; *T. pratense* Linn., red clover; and *T. repens* Linn., white clover, occur as casual introductions, or as purposely introduced species at higher altitudes in Benguet; there is no evidence that any of these clovers have become naturalized.

TRIFOLIUM PALLIDUM Walldst. & Kit.; Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 102.

GERANIACEAE

1. **ERODIUM** L'Héritier

ERODIUM CICUTARIUM (Linn.) L'Hérit. ex Ait. Hort. Kew. 2 (1789) 414; Knuth in Engl. Pflanzenreich 53 (1912) 274.

Geranium cicutarium Linn. Sp. Pl. (1753) 680.

Luzon, Benguet, *Bur. Sci.* 31669 Santos. In waste places, altitude about 2,300 m. A weed of wide distribution in temperate regions, unquestionably a recently introduced plant in Benguet.

The so-called rose-geranium, *Pelargonium radula* (Cav.) L'Hérit., is commonly cultivated in the Philippines and is locally known as *malva rosa*; it rarely or never produces flowers in the Philippines. It was described by Blanco as *Malva moschata* Blanco, Fl. Filip. (1837) 551, ed. 2 (1845) 385, ed. 3, 2 (1879) 344, non Linn., which was reduced by F.-Villar, Novis. App. (1880) 32, to *Pelargonium odoratissimum* Ait.; see Merrill Sp. Blancoanae (1918) 194.

OXALIDACEAE

1. **OXALIS** Linnaeus

OXALIS REPENS Thunb. Diss. Oxal. (1781) 16; B. L. Rob. in Journ. Bot. 44 (1906) 391; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 431, 3 (1908) Bot. 411, 5 (1910) Bot. 355, Fl. Manila (1912) 265, Interpret. Herb. Amb. (1917) 288, Sp. Blancoanae (1918) 195.

Oxalis acetosella Blanco Fl. Filip. (1837) 388, ed. 2 (1845) 272, ed. 3, 2 (1878) 141; F.-Vill. Novis. App. (1880) 33, non Linn.

Oxalis corniculata Miq. Fl. Ind. Bat. 1² (1858-59) 135; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 320; F.-Vill. Novis. App. (1880) 32; Vidal Phan. Cuming. Philip. (1885) 100, non Linn.

Throughout the Philippines, in waste places, open grasslands, etc., sea level to an altitude of 2,200 m. Warmer parts of the Old World.

Local names: Daraisig (Bik.); iayo (Pamp.); kunġi (Pamp.); kanapa (Ig.); malabalúgbug-dagis (Pamp.); marasiksík (Ilk.); pikhik (Iv.); sala-mági (Bon.); susokoyili (Tag.); taínġang-dagá' (Tag.).

OXALIS MARTIANA Zucc. in Denkschr. Akad. Muench. 9 (1823-24) 144; Merr. Fl. Manila (1912) 265.

In old gardens, an occasional escape from cultivation. Introduced from tropical America.

2. **BIOPHYTUM** de Candolle

BIOPHYTUM APODISCIAS (Turcz.) Edgw. & Hook. f. in Hook. f. Fl. Brit. Ind. 1 (1874) 437; Rolfe in Journ. Bot. 23 (1885) 211.

Oxalis apodiscias Turcz. in Bull. Soc. Nat. Mosc. 36¹ (1863) 430.

Oxalis sessilis Ham. in Wall. Cat. (1831) No. 4344, *nomen nudum*; Vidal Phan. Cuming. Philip. (1885) 100.

Luzon (Bontoc, Lepanto, Benguet), Panay, Mindanao (Lanao, Bukidnon, Davao). In open grasslands, chiefly at medium altitudes. India to New Guinea.

Local names: Babain (Ilk., Bon.); baín-baín (Ilk.).

BIOPHYTUM SENSITIVUM (Linn.) DC. Prodr. 1 (1824) 690; Blanco Fl. Filip. ed. 2 (1845) 272, ed. 3, 2 (1878) 142; F.-Vill. Novis. App. (1880) 33; Ceron Cat. Pl. Herb. Manila (1892) 35; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 67, Fl. Manila (1912) 266, Sp. Blancoanae (1918) 195.

Oxalis sensitiva Linn. Sp. Pl. (1753) 434; Blanco Fl. Filip. (1837) 389; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 321; Vidal Phan. Cuming. Philip. (1885) 100.

Oxalis cunningiana Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 426.

Oxalis reinwardtii F.-Vill. Novis. App. (1880) 33, non Zucc.

Northern Luzon to Mindanao and Sulu. In grasslands, open thickets, etc., at low and medium altitudes. Pantropic.

Local names: Damóng-bingkálat (Tag.); damong-húya (Bis.); guyankan (Sub.); hoya-hoya (P. Bis.); makahiáng-laláki (Tag.); mahihíin (Ilk.); makahiá (Tag.); niug-niug (Sul.).

3. AVERRHOA Linnaeus

AVERRHOA BILIMBI Linn. Sp. Pl. (1753) 428; Blanco Fl. Filip. (1837) 391, ed. 2 (1845) 273, ed. 3, 2 (1878) 144, t. 138; F.-Vill. Novis. App. (1880) 33; Vidal Sinopsis Atlas (1883) 18, t. 23, f. A; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 28, 27 (1905) 27, Fl. Manila (1912) 266, Sp. Blancoanae (1918) 195.

Throughout the settled areas of the Philippines, cultivated and semi-cultivated. Introduced from tropical America. Pantropic in cultivation.

Local names: íba (Tag., Sul., P. Bis.); íbag (Mbo.); kalamiás (Tag.); kalanuas (Tag.); kalingiua (Bis.); kamiás (Tag.); kolonanas (Tag.); kolonauas (Tag.); kilingíba (Bik.); íbe (Yak.); piás (Ilk.); puis (Ig.).

AVERRHOA CARAMBOLA Linn. Sp. Pl. (1753) 428; Blanco Fl. Filip. (1837) 391, ed. 2 (1845) 274, ed. 3, 2 (1878) 145, t. 139; F.-Vill. Novis. App. (1880) 33; Vidal Sinopsis Atlas (1883) 18, t. 23, f. B; Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 73; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 28, 27 (1905) 27, Fl. Manila (1912) 266, Sp. Blancoanae (1918) 195.

Averrhoa pentandra Blanco Fl. Filip. (1837) 392, ed. 2 (1895) 274, ed. 3, 2 (1878) 145.

Cultivated and semicultivated throughout the Philippines. Introduced from tropical America. Pantropic in cultivation.

Local names: Ba'ímbing (Sul.); balimbíng (Tag., Bik.); balingbing (Bik., C. Bis.); bilimbin (Tag.); daligán (Ilk.); dalihan (Ibn.); galañgán (P. Bis.); galurán (Ibn.); garáhan (Bis.); garulán (Ibn.); malimbín (S. L. Bis.); sirinate (Ting.).

4. SARCOTHECA Blume

SARCOTHECA PHILIPPICA (F.-Vill.) Hallier f. in Meded. Rijks Herb. (1911) 2.

Connaropsis philippica F.-Vill. Novis. App. (1880) 33; excl. syn. Blanco; Merr. Sp. Blancoanae (1918) 19.

Panay, *vide* F.-Villar. A species of wholly doubtful status, known

only from F.-Villar's description which, however, conforms well to the characters of *Sarcotheca*. Endemic.

Local names: Balabangkílin (P. Bis.); malabangkílin (P. Bis.).

LINACEAE

1. PHILBORNEA Hallier f.

PHILBORNEA PALAWANICA Hallier f. in Arch. Néerl. Sci. Exact. Nat. III B 1 (1912) 111, Fedde Repert. 13 (1914) 415.

Palawan, *Elmer 12870*. In forests. Endemic; the genus with one other known species in Borneo.

2. IXONANTHES Jack

IXONANTHES LONGIPEDUNCULATA Merr. in Philip. Journ. Sci. 17 (1920) 264.

Mindanao (Surigao), *B. S. 34488 Ramos & Pascasio*. On ridges at low altitudes. Endemic.

Another species is represented by *Elmer 17234* from Sorsogon Province, Luzon, apparently allied to *Ixonanthes grandiflora* Hochr. and *I. reticulata* Jack.

3. CTENOLOPHON Oliver

CTENOLOPHON PHILIPPINENSE Hallier f.; Schneider in Philip. Bureau Forestry Bull. 14 (1916) 127.

Samar, Leyte, Mindanao (Surigao, Agusan), *F. B. 23586 Lasquety, 21041 Sherfese, 20827 Oro, 26870 Franco, 20838 Rafael, 23030 Ponce, 23527 Cenabre, 24028 Razon, 26235 Ponce & Mallonga*. In forests at low altitudes. Endemic.

Local names: Mahalan (Mbo.); súdyang (S. L. Bis., C. Bis.); súdyang babáe (S. L. Bis., C. Bis.); súdyang-laláki (S. L. Bis.).

ERYTHROXYLACEAE

1. ERYTHROXYLUM P. Browne

ERYTHROXYLUM CUNEATUM (Wall.) Kurz in Journ. As. Soc. Beng. 43² (1874) 135; Diels in Engl. Pflanzenreich 29 (1907) 146, *f. 26*; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 232.

Ficus cuneata Wall. Cat. (1831) No. 4534, *nomen nudum*.

Urostigma ? cuneatum Miq. in Hook. Lond. Journ. Bot. 6 (1847) 585.

Erythroxylum burmanicum Griff. Not. 4 (1854) 468, *t. 581, f. 3*;

Merr. in Philip. Bureau Forestry Bull. 1 (1903) 25.

Luzon (Ilocos Norte, Ilocos Sur, Bulacan, Rizal, Camarines). In secondary forests, especially on limestone formations at low and medium altitudes. Tenasserim, Malay Peninsula, Sumatra, Java.

Local names: Baransiágau (Ilk.); manambo (Bik.); sáleng (Tag.); salñgen (Ilk.).

ERYTHROXYLUM IWAHIGENSE Elm. Leaf. Philip. Bot. 5 (1913) 1776.

Palawan, *Elmer 18227*. On forested river banks, altitude about 150 m. Endemic.

ERYTHROXYLUM PLATYPHYLLUM Merr. in Philip. Journ. Sci. 3 (1908) Bot. 232.

Mindanao (Zamboanga, Misamis), *F. B. 9285 Whitford & Hutchinson*,

17943 Miranda, 20102 Stadtmiller, 13908 Foxworthy, B. S. 11820 Robinson, Merrill 11637. In thickets back of the mangrove swamps. Endemic.

In addition to the above indigenous species *Erythroxylon coca* Lam., the cocaine plant, is a recent introduction and is occasionally found in cultivation; Merrill Fl. Manila (1912) 267.

ZYGOPHYLLACEAE

1. TRIBULUS Tournefort

TRIBULUS CISTOIDES Linn. Sp. Pl. (1753) 387; DC. Prodr. 1 (1824) 703; F.-Vill. Novis. App. (1880) 32; Vidal Phan. Cuming. Philip. (1885) 99, Rev. Pl. Vasc. Filip. (1886) 73; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 411, Fl. Manila (1912) 268, Sp. Blancoanae (1918) 196.

Tribulus lanuginosus Blanco Fl. Filip. (1837) 350, ed. 2 (1845) 245, ed. 3, 2 (1878) 91; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 321, non Linn.

Tribulus macranthus Hassk. in Flora 48 (1865) 403.

Babuyan Islands (Fuga), Luzon (Cavite, Rizal, Tayabas), Mindoro. Local in waste places, in towns, near the seashore, etc., apparently introduced. Pantropic.

RUTACEAE

1. ZANTHOXYLUM Linnaeus

ZANTHOXYLUM ALATUM Roxb. Fl. Ind. ed. 2, 3 (1832) 768; Hook. f. Fl. Brit. Ind. 1 (1875) 493.

Luzon (Benguet), Merrill Phil. Pl. 774, B. S. 20244 Sandkuhl. In thickets about limestone cliffs and boulders, altitude 1,300 to 1,500 m. India to southeastern China.

Local names: Chi-it (Ig.); sibit-paklaut (Ig.).

ZANTHOXYLUM AVICENNAE (Lam.) DC. Prodr. 1 (1824) 726; F.-Vill. Novis. App. (1880) 34, Rev. Pl. Vasc. Filip. (1886) 74, Phan. Cuming. Philip. (1885) 100; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 27.

Fagara avicennae Lam. Encycl. 2 (1788) 445; Merr. Sp. Blancoanae (1918) 196.

Fagara pterota Blanco Fl. Filip. (1837) 66, ed. 2 (1845) 47, ed. 3, 1 (1877) 88, non Linn.

Zanthoxylum ivahigense Elm. Leaf. Philip. Bot. 5 (1913) 1833.

Luzon (Benguet, Zambales, Nueva Ecija, Rizal, Batangas, Camarines), Palawan, Mindanao (Misamis, Cotabato), Merrill Sp. Blancoanae 1060, 1002, B. S. 22025 Santos, 26303 Ramos & Edaño, 20988, 22342 Ramos, 905 Foxworthy, F. B. 22464 Klemme, 23044 Ferraris, 28756 Simcon, Elmer 12751. In thickets and forests, chiefly at medium altitudes, in Benguet ascending to 2,200 m. Southeastern China, ? Moluccas.

Local names: Bagatambal (Bis.); buñgai (Tagb.); itañgan (Ig.); kaytana (Tag.); kañgai (Pamp.); kayutana (Bik., Pamp.); salai (Pamp.); salai-kañgai (Pamp.); salai-marbar (Bis.).

ZANTHOXYLUM DIABOLICUM Elm. Leaf. Philip. Bot. 2 (1908) 477.

Leyte, Samar, *Elmer 1027, F. B. 12866 Rosenbluth, Phil. Pl. 1680 Merrill*. In forests at low and medium altitudes, ascending to 1,250 m. Endemic.

Local names: Madbad (S. L. Bis.); salai (C. Bis.).

ZANTHOXYLUM INTEGRIFOLIOLUM (Merr.) comb. nov.

Fagara integrifoliola Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 68, 3 (1908) Bot. 411.

Batan Islands and northern Luzon southward to Mindoro, Sibuyan, and Samar. In forests at low and medium altitudes. Formosa, Botel-Tobago.

Local names: Bagilambag (Tag.); barok (Iv.); duso (Tag.); kagasáka (Cag.); kayetána (Tag.); kayutána (Tag.); kaytána (Tag.); panahauon (S. L. Bis.); salai (P. Bis., S. L. Bis.); silai (P. Bis.); tambilukau (Tag.); titána (Tag.).

ZANTHOXYLUM RHETSA (Roxb.) DC. Prodr. 1 (1824) 728; F.-Vill.

Novis. App. (1880) 35; Vidal Sinopsis Atlas (1883) 18, t. 24, f. B.

Fagara rhetsa Roxb. Hort. Beng. (1814) 11, *nomen nudum*, Fl. Ind. 1 (1820) 438; Merr. Sp. Blancoanae (1918) 196.

Fagara piperita Blanco Fl. Filip. (1837) 64, ed. 2 (1845) 47, ed. 3, 1 (1877) 87, non Linn.

Zanthoxylum oxyphyllum F.-Vill. Novis. App. (1880) 34, non Edgw.

Northern Luzon (Cagayan) to Palawan and Mindanao, *Cuming 1218, 1356, F. B. 6920 Curran, 1455 Ahern's collector, 1565 Borden, 7715 Curran & Merritt, 1710 Clark, Merrill Phil. Pl. 961, 872, Elmer 18231* (as *Clau-sena*). In thickets and forests at low and medium altitudes. India to Indo-China and (?) Malaya.

Local names: Kasabáng (Ilk.); kasalang (Sbl.); kayetána (Tag.); kay-tána (Tag.); kayutána (Tag.); sarai (P. Bis.); sagai-kañgai (Pamp.); salai (Bis.).

ZANTHOXYLUM TORVUM F.-Muell. Fragm. 7 (1871) 140; Hochr. Pl.

Bogor. Exsic. (1904) 18.

Zanthoxylum glandulosum T. & B. Cat. Hort. Bogor. (1866) 234, *nomen nudum*.

Fagara torva Engl. in Engl. & Prantl Nat. Pflanzenfam. 3⁴ (1895) 119; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 424.

Fagara warburgii Perk. Frag. Fl. Philip. (1905) 160.

Luzon (Tayabas, Isabela), Leyte, Mindanao (Lanao), *Warburg 11784, B. S. 13261 Ramos, Wenzel 1232, Clemens 667, Elmer 7278*. In forests and thickets at low and medium altitudes. Java, Moluccas, tropical Australia.

EXCLUDED SPECIES

ZANTHOXYLUM BUDRUNGA Wall.; F.-Vill. Novis. App. (1880) 35.2. **EVODIA** Forster**EVODIA ACUMINATA** Merr. in Philip. Journ. Sci. 5 (1910) Bot. 183.

Luzon (Laguna, Camarines, Sorsogon), *F. B. 10530 Curran, B. S. 23808 Ramos, 33800, 33734, 33482 Ramos & Edaño*. In thickets or forests at low altitudes. Endemic.

EVODIA ARBOREA Elm. Leaf. Philip. Bot. 8 (1915) 2806.

Palawan, *Elmer 19159*. In forests, altitude about 225 m. Endemic.

EVODIA BENGUETENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2808.

Luzon (Benguet), *Elmer 14276, F. B. 4965 Curran, Sandkuhl 245, Merrill Phil. Pl. 771* (as *E. retusa* Merr.). On ridges, altitude 1,800 to 2,200 m. Endemic.

EVODIA BINTOCO Blanco Fl. Filip. ed. 2 (1845) 50, ed. 3, 1 (1877) 93; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 27, Sp. Blancoanae (1918) 197.

Evodia latifolia F.-Vill. Novis. App. (1880) 34; Vidal Sinopsis Atlas (1883) 18, t. 24, f. D, Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 74, non DC.

Evodia mindanensis Merr. in Philip. Bureau Forestry Bull. 1 (1903) 25.

Mindoro, Sibuyan, Tablas, Panay, Leyte, Bohol, Mindanao, Basilan. In thickets and secondary forests at low altitudes. Borneo.

Local names: Basoloi (Bag.); bintóko (C. Bis.); botong (P. Bis.); bulong (P. Bis.); káhoi-dalága (Tag.); maliko (Bis.); tankapan (Bik.).

EVODIA CAMIGUINENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 296.

Camiguin de Misamis, *B. S. 14664 Ramos*. In thickets or forests. Endemic.

EVODIA CONFUSA Merr. in Philip. Journ. Sci. 20 (1922) 391.

Evodia glabra F.-Vill. Novis. App. (1880) 34; Vidal Rev. Pl. Vasc. Filip. (1886) 74; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 68, Sp. Blancoanae (1918) 197, non Blume.

? *Melicope tetrandra* Blanco Fl. Filip. (1837) 293, non Roxb.

? *Evodia triphylla* Blanco op. cit. ed. 2 (1845) 50, ed. 3, 1 (1877) 92, non DC.

? *Cissus frutescens* Blanco Fl. Filip. (1837) 70.

? *Cissus arborea* Blanco op. cit. 2 (1845) 51, ed. 3, 1 (1877) 95, non Forst.

Luzon (Cagayan, Bontoc, Bataan, Rizal, Laguna, Camarines, Tayabas, Sorsogon), Polillo, Mindoro, Samar, Leyte, Panay, Mindanao. In forests at low and medium altitudes; common. Celebes.

Local names: Anino (P. Bis.); batukás (S. L. Bis.); bituko (S. L. Bis.); bugáuak (Tag.); káhoi-dalága (Tag.); kalabugau (P. Bis.); kamál (Tag.); kamálan (Tag.); katkatódai (Ig.); lablab (Neg); magayañga (Mbo.); malatadiáng (Tag.); mamunug (Sul.); mañggúiau (Bik.); mangkáu (Bik., Tag.); matáng-árau (Tag.); tunko-tunko (Tag.); ulié' (Ibn.).

EVODIA CORIACEA Merr. in Philip. Journ. Sci. 17 (1920) 265.

Dinagat, *B. S. 35172 Ramos & Pascasio*. In forests at low altitudes. Endemic.

EVODIA CRASSIFOLIA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 362.

Samar, Leyte, Mindanao (Surigao), *Merrill Phil. Pl. 1608, Wenzel 715, 912, 1690, 1718, F. B. 26865 Tomeldan*. In forests, old clearings, etc., at low and medium altitudes. Endemic.

Local names: Balasbas (S. L. Bis.); kampo-pod (S. L. Bis.).

EVODIA DUBIA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 23, Philip. Journ. Sci. 5 (1910) Bot. 355.

Luzon (Lepanto, Benguet). In thickets and forests, altitude 1,200 to 2,400 m. Endemic.

Local name: Sidi-sidi (Ig.).

EVODIA GLABERRIMA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 18.

Luzon (Tayabas, east coast), *B. S. 28864 Ramos & Edaña*. In forests along streams at low altitudes. Endemic.

EVODIA LAXA Elm. Leaf. Philip. Bot. 4 (1912) 1509.

Sibuyan, *Elmer 12306, 12562*. In forests, altitude about 375 m. Endemic.

EVODIA LAXIRETA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 295.

Mindanao (Bukidnon), *B. S. 21407 Escritor*. In thickets or forests. Endemic.

EVODIA MELIAEFOLIA (Hance) Benth. Fl. Hongk. (1861) 58; Merr. in Philip. Journ. Sci. 14 (1919) 409.

Megabotrya meliaefolia Hance in Walp. Ann. 2 (1851-52) 259.

Boymia glabrifolia Champ. in Hook. Kew Journ. Bot. 3 (1851) 330.

Eurycoma dubia Elm. Leaf. Philip. Bot. 2 (1908) 481.

Luzon (Benguet), Negros, *Elmer 10120, B. S. 31968 Santos*. On slopes and forested ridges, altitude 900 to 1,800 m. Southern Japan, Riu Kiu Islands, Formosa, southern China.

Local name: Galiuiguan (Ig.).

EVODIA MONOPHYLLA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 269.

Mindoro (Mt. Halcon), *Merrill 6169*. In forests, altitude about 750 m. Endemic.

EVODIA PERGAMENTACEA Elm. Leaf. Philip. Bot. 2 (1908) Bot. 479.

Negros, *Elmer 9504*. In mossy thickets, altitude about 1,500 m. Endemic.

Local name: Tañgulimus (C. Bis.).

EVODIA PULGARENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1831.

Palawan, *Elmer 13216*. In thickets, exposed ridges and peaks, altitude about 1,300 m. Endemic.

EVODIA RETICULATA Merr. in Philip. Journ. Sci. 2 (1907) Bot. 277, 5 (1910) Bot. 355.

Mindoro, *Merrill 5711*. In open heaths, altitude about 2,400 m. Endemic.

EVODIA RETUSA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 68.

Luzon (Abra, Bontoc, Apayao, Nueva Ecija, Zambales, Bataan, Laguna, Tayabas), Mindoro, Panay. On forested ridges, altitude 1,200 to 1,800 m. Endemic.

Local names: Ubu-úbug (Ting.); taruñgatau (Neg.).

EVODIA SEMECARPIFOLIA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 23.

? *Evodia roxburghiana* F.-Vill. Novis. App. (1880) 34; Vidal Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 74, non Benth.

Luzon (Bontoc, Benguet, Pampanga, Tayabas, Rizal, Laguna, Sorsogon). In thickets and forests, altitude 1,300 to 2,000 m. Endemic.

Local names: Babata (Neg.); pili (Ig.); luos (Bon.); tiklad (Klg.).

EVODIA SESSILIFOLIOLA Merr. in Philip. Journ. Sci. 14 (1919) 410.

Luzon (Benguet), *B. S.* 31788 Santos, 40332 Ramos & Edaña, Williams 1531, Clemens, Sandkuhl. In forests, altitude 2,000 to 2,400 m. Endemic.

Local name: Atipan (Ig.).

EVODIA SUBCAUDATA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 298.

Mindanao (Butuan), *B. S.* 15922 Fenix. In thickets or forests. Endemic.

EVODIA TERNATA (Blanco) Merr. in Philip. Journ. Sci. 9 (1914) Bot. 297, Sp. Blancoanae (1918) 197.

Orixa ternata Blanco Fl. Filip. (1837) 62, ed. 2 (1845) 45, ed. 3, 1 (1877) 84.

Evodia robusta F.-Vill. Novis. App. (1880) 34, non Hook. f.

Luzon (Cagayan, Laguna, Bataan, Rizal), Palawan, Mindanao, Merrill Sp. Blancoanae 906, 913, F. B. 20402 Villamil, 1474 Ahern's collector, 2055 Borden, B. S. 13601 Ramos. In thickets or forests at low and medium altitudes. Endemic.

Local names: Gilo (Kuy.); matang-árau (Tag.).

EVODIA VILLAMILII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 296.

Luzon (Laguna), Mindanao (Lanao), F. B. 20653, 20880 Villamil, 25207 Alvarez. In primary forests, altitude 300 to 1,000 m. Endemic.

EVODIA VILLOSA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 84.

Luzon (Abra, Bontoc), Vanoverbergh 1002, 2197, 3084, B. S. 27012, 37827, 37039 Ramos & Edaña. In forests, altitude 1,300 to 1,700 m. Endemic.

Local names: Paákan (Bon.); palidpíd (Bon.).

EXCLUDED SPECIES

EVODIA FRAXINIFOLIA Hook. f.; F.-Vill. Novis. App. (1880) 34.

EVODIA RIDLEYI Hochr.

Rarely cultivated in Manila; a recent introduction from Singapore; probably but a form of the exceedingly variable *Evodia hortensis* Forst., of Polynesia.

3. TETRACOMIA Hooker f.

TETRACOMIA ACUMINATA Merr. in Philip. Journ. Sci. 17 (1920) 265.

Mindanao (Surigao), Bucas Grande, B. S. 35135, 35106, 34707 Ramos & Pascasio. In forests at low altitudes. Endemic.

TETRACOMIA PACHYPHYLLA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 19.

Mindanao (Surigao), F. B. 26985 Ponce. In semiopen forests at low altitudes. Endemic.

TETRACTOMIA PHILIPPINENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2813.

Leyte, Mindanao (Agusan), *Elmer* 13702, 13751, *B. S.* 15280 *Ramos*.
On exposed forested ridges, altitude 1,600 to 1,700 m. Endemic.

Local names: Aliayan (Mbo.); yadagon (Mbo.).

4. MELICOPE Forster

MELICOPE CURRANII Merr. in Philip. Journ. Sci. 3 (1908) Bot. 234.

Luzon (Tayabas), *F. B.* 9663 *Curran*, *B. S.* 29224 *Ramos & Edaño*, *Baker* 3269. In forests at low altitudes. Endemic.

MELICOPE DENSIFLORA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 182.

Batan and Babuyan Islands, *B. S.* 3235 *Mearns*, 3603 *Fénix*, 10195, 16682 *McGregor*. In thickets at low altitudes.

Local name: Idakakayo (Iv.).

MELICOPE MINDANAENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2809.

Mindanao (Agusan, Bukidnon), *Elmer* 13844, *B. S.* 38456 *Ramos & Edaño*. In forests, altitude about 1,350 m. Endemic.

Local names: Liuaan (Mbo.); palpalan (Buk.).

MELICOPE MONOPHYLLA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 139;
Elm. Leaf. Philip. Bot. 8 (1915) 2810 (var. *glabra* Elm.).

Panay, Mindanao (Bukidnon, Butuan, Cotabato, Lanao, Davao, Zamboanga), *B. S.* 21469, 21472, 39039, 38871, 38818 *Ramos & Edaño*, *Escritor*, *Clemens* 491, *Elmer* 11083, 10977, 13897, *Weber* 1109. In forests at low and medium altitudes. Endemic.

Local names: Dalou (Bag.); kulasi (Buk.); poagan (Bag.); tulagak (Buk.).

MELICOPE NITIDA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 362.

Leyte, *Wenzel* 822, 1002. In forests, altitude about 500 m. Endemic.

MELICOPE OBTUSA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 24.

Luzon (Benguet, Bontoc), *Elmer* 6370, *Vanoverbergh* 1220. In thickets, altitude 1,200 to 1,600 m. Endemic.

MELICOPE TRIPHYLLA (Lam.) Merr. in Philip. Journ. Sci. 7 (1912) Bot. 375, Sp. Blancoanae (1918) 198.

Fagara triphylla Lam. Encycl. 2 (1788) 447, excl. syn. Rumph.; Willd. Sp. Pl. 1² (1797) 666.

Evodia triphylla DC. Prodr. 1 (1824) 724; Hook. f. Fl. Brit. Ind. 1 (1875) 448, quoad Philip.; F.-Vill. Novis. App. (1880) 34; Vidal Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 74.

Zanthoxylum lamarchianum Cham. in Linnaea 5 (1830) 58.

Fagara octandra Blanco Fl. Filip. (1837) 67, ed. 2 (1845) 48, ed. 3, 1 (1877) 90, non Linn.

Bergera ternata Blanco op. cit. 360, 254, 108.

Zanthoxylum zeylanicum Miq. Fl. Ind. Bat. 1² (1858-59) 671, quoad Philip., non DC.

Zanthoxylum pteleaefolium Champ. ex Benth. in Hook. Kew Journ. Bot. 3 (1851) 330, p. p.; quoad Philip.

Melicope ternata Vidal Cat. Pl. Prov. Manila (1880) 21, Synopsis Atlas (1883) 18, t. 24, f. A; F.-Vill. Novis. App. (1880) 34, non Forst.

Melicope luzonensis Engl. in Engl. & Prantl Nat. Pflanzenfam. 3⁴ (1897) 122, *nomen nudum*; Perk. Frag. Fl. Philip. (1905) 161; Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 24, Philip. Journ. Sci. 1 (1906) Suppl. 69, 2 (1907) Bot. 431, 3 (1908) Bot. 411, 5 (1910) Bot. 355.

Melicope odorata Elm. Leaflet. Philip. Bot. 2 (1908) 476.

Babuyan Islands and northern Luzon to Palawan, Samar, and Leyte. In forests at low and medium altitudes, in Benguet ascending to 2,000 m; common. Endemic.

Local names: Aglimai (Ig.); agui (Bik.); alibuñgug (C. Bis.); balingua (Bik.); binting-dalága (Tag.); bulig (Klg.); katúdai-bakés (Ilk.); matang-árau (Tag.); nangmagan (Ig.); pahikat (Klg.); salimutbut (S. L. Bis.); tikala-na-ihalas (C. Bis.); tamiling (Ig.); ulatan (Ig.).

5. LUNASIA Blanco

LUNASIA AMARA Blanco Fl. Filip. (1837) 783, ed. 3, 3 (1879) 191; F.-Vill. Novis. App. (1880) 35; Vidal Synopsis Atlas (1883) 18, t. 24, f. C, Rev. Pl. Vasc. Filip. (1886) 75, Phan. Cuming. Philip. (1885) 100; Merr. in Philip. Bureau. Forestry Bull. 1 (1903) 26, Govt. Lab. Publ. (Philip.) 27 (1905) 27, Philip. Journ. Sci. 1 (1906) Suppl. 69, 9 (1914) Bot. 302, Sp. Blancoanae (1918) 198.

Pilocarpus amara Blanco Fl. Filip. ed. 2 (1845) 540.

Rabelaisia philippinensis Planch. in Hook. Lond. Journ. Bot. 4 (1845) 519 t. 17, 18; Miq. Fl. Ind. Bat. 1² (1858) 673.

Lunasia philippinensis F.-Vill. Novis. App. (1880) 35.

Lunasia reticulata Elm. Leaflet. Philip. Bot. 4 (1912) 1511.

Northern Luzon (Cagayan) to Mindanao and Palawan. In thickets and forests at low and medium altitudes; common. Endemic.

Local names: Apdong-káhoi (Tag.); bunglái (Bik.); dayangdang (Ilk.); labau (S. L. Bis.); lubi-lubi (C. Bis.); lunas (Tag.); pait (Bik., Tag.); paítan (Bis., Ilk.); palatángan (Gad.); papait (Bik.); saltiki (Tag.); santiki (Tag.).

Var. REPANDA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 302.

Luzon (Nueva Vizcaya), Mindoro, Mindanao (Davao). Habitat of the species. Endemic.

LUNASIA BABUYANICA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 411.

Babuyan Islands (Camiguin), *B. S. 4050 Fénix*. In thickets near the sea. Endemic.

LUNASIA MACROPHYLLA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 300.

? *Lunasia grandifolia* F.-Vill. Novis. App. (1880) 35, non Miq.

Mindanao (Zamboanga), *F. B. 9299 Whitford & Hutchinson, Ahern 559, 643*. In primary forests at low altitudes. Endemic.

Local name: Sagit (Sul.).

LUNASIA MOLLIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 299.

Cebu, Bohol, *B. S. 11026 Ramos, F. B. 25110 Cateban*. In thickets and forests at low altitudes. Endemic.

LUNASIA NIGROPUNCTATA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 301.

Luzon (Tayabas, east coast), *B. S.* 21188 *Escritor*. In forests at low altitudes. Endemic.

LUNASIA OBTUSIFOLIA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 300.

Bohol, *B. S.* 1237 *McGregor*. On cliffs along the seashore. Endemic.

EXCLUDED SPECIES

LUNASIA COSTULATA Miq.; F.-Vill. Novis. App. (1880) 35.

LUNASIA PARVIFOLIA (Planch.) F.-Vill. l. c.; Vidal Rev. Pl. Vasc. Filip. (1886) 75.

Rabelaisia parvifolia Planch. in Hook. Lond. Journ. Bot. 4 (1845) 519.

The specimens cited by Vidal represent a form of *Lunasia amara* Blanco.

6. BOENNINGHAUSENIA Reichenbach

BOENNINGHAUSENIA ALBIFLORA Reichb. Conspect. (1828) 197; Hook. f. Fl. Brit. Ind. 1 (1875) 486; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 355.

Luzon (Benguet). In the mossy forest on the higher mountains, altitude 2,000 to 2,400 m. Himalayan region through China to Japan and Formosa.

7. TODDALIA Jussieu

TODDALIA ASIATICA (Linn.) Lam. Tabl. Encycl. 2 (1793) 116.

Paullinia asiatica Linn. Sp. Pl. (1753) 365.

Toddalia aculeata Pers. Syn. 1 (1805) 249; F.-Vill. Novis. App. (1880) 35; Vidal Sinopsis Atlas (1883) 18, t. 24, f. E, Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 75.

Toddalia effusa Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 443; F.-Vill. Novis. App. (1880) 35.

Toddalia ? *ambigua* Turcz. op. cit. 444; F.-Vill. l. c.

Luzon (Benguet, Bontoc, Rizal, Laguna, Nueva Vizcaya), Palawan. In thickets at low and medium altitudes, ascending to 1,700 m. India to southern China and Malaya.

Local names: Ataŋgen (Ig.); bugkáu (Ig.); bukáu (Ig.); dauag (Tag.); guiot (Ig.); kaboat (Tagb.); palina (Bon.); subit (Ig.).

8. ACRONYCHIA Forster

ACRONYCHIA OBOVATA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 274.

Mindanao (Surigao), *F. B.* 26473 *Mallonga*. On slopes at low altitudes. Endemic.

ACRONYCHIA PEDUNCULATA (Linn.) Miq. Fl. Ind. Bat. Suppl. (1861-62) 532; Merr. Sp. Blancoanae (1918) 199.

Jambolifera pedunculata Linn. Sp. Pl. (1753) 349 p.p.

Cyminosma pedunculata DC. Prodr. 1 (1824) 722.

Gela lanceolata Lour. Fl. Cochinch. (1790) 232.

Selas lanceolatum R. & S. Syst. 2 (1825) 216.

Cyminosma ankenda Gaertn. Fruct. 1 (1788) 280, t. 58, f. 6.

Acronychia laurifolia Blume Cat. Gew. Buitenz. (1823) 27, 63, Bijdr. (1825) 245; F.-Vill. Novis. App. (1880) 35; Vidal Rev. Pl. Vasc. Filip. (1886) 75; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 69.

Melicope conferta Blanco Fl. Filip. ed. 2 (1845) 205, ed. 3, 2 (1878) 19.

Northern Luzon (Cagayan) to Palawan, Mindanao, and the Sulu Archipelago. In forests at low and medium altitudes, ascending to 1,400 m. India to southern China and Malaya.

Local names: Alibóbo (Tag.); kolakolat (Neg.); pamalatuṅgan (Ibn.); panglungbúyen-a-babái (Ilk.); uás (Ibn.); úto (Ibn.).

9. SKIMMIA Thunberg

SKIMMIA JAPONICA Thunb. Nov. Gen. (1783) 58; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 201, 5 (1910) Bot. 355; Skan in Curtis's Bot. Mag. IV 1 (1905) *t.* 8038.

Luzon (Abra, Lepanto, Bontoc, Benguet). In the mossy forests on the higher mountains, altitude 1,700 to 2,400 m. Japan, China, Formosa.

Local names: Baṅgung (Ting.); bultik (Ting.); danetket (Ig.); talobtob (Bon.).

10. GLYCOSMIS Correa

GLYCOSMIS PENTAPHYLLA (Retz.) Correa in Ann. Mus. Hist. Nat. Paris 6 (1805) 386; DC. Prodr. 1 (1824) 538; Oliver in Journ. Linn. Soc. Bot. 5 (1861) Suppl. 2: 37; F.-Vill. Novis. App. (1880) 35; Vidal Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 76, Sinopsis Atlas (1883) 18, *t.* 25, *f.* A; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 26.

Limonia pentaphylla Retz. Obs. 5 (1789) 24.

Toluijera cochinchinensis Lour. Fl. Cochinch. (1790) 262.

Glycosmis citrifolia Lindl. in Trans. Hort. Soc. 6 (1826) 72; F.-Vill. Novis. App. (1880) 35; Usteri Beitr. Ken. Philp. Veg. (1905) 113; Ridl. in Journ. Str. Branch Roy. As. Soc. 75 (1917) 11.

Murraya cerasiformis Blanco Fl. Filip. (1837) 363.

Murraya exotica Blanco op. cit. ed. 2 (1845) 266, ed. 3, 2 (1878) 110, *t.* 137, non Linn.

Murraya lobata Blanco Fl. Filip. (1837) 363, ed. 2 (1845) 256, ed. 3, 2 (1878) 112.

Bursera ? *nitida* F.-Vill. Novis. App. (1880) 41.

Marignia ? *nitida* Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 475.

Glycosmis cochinchinensis Pierre ex Engl. in Engl. & Prantl Nat. Pflanzenfam. 3⁴ (1895) 185, *f.* 106; Merr. Fl. Manila (1912) 268, Sp. Blancoanae (1918) 199.

Glycosmis angularis Elm. Leaf. Philip. Bot. 2 (1908) 489.

Glycosmis greenei Elm. op. cit. 4 (1912) 1512.

Northern Luzon (Cagayan) to Palawan and Mindanao, in most or all islands and provinces; often common. Usually in thickets and secondary forests at low and medium altitudes, ascending to 1,100 m. India to Indo-China and Malaya; polymorphous.

Local names: Aniṅguái (Pang.); gingging (Tag.); linauin (Ilk.); mayongtung (P. Bis.); mabutan (Sul.); panigíran (Ibn.); patuláutuláu (Ibn.); panalayápen (Ilk.).

GLYCOSMIS PLATYPHYLLA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 273.

Leyte, Samar, *Wenzel 1611*, *B. S. 17472 Ramos*. In forests at low altitudes. Endemic.

DOUBTFUL SPECIES

GLYCOSMIS BILOCULARIS Thwaites; F.-Vill. Novis. App. (1880) 35.

GLYCOSMIS RUPESTRIS Ridl. in Journ. Str. Branch Roy. As. Soc. 75 (1917) 15.

Ridley cites *Loher 6767*, *6774* from Rizal Province, Luzon, as possibly representing his species, which is characterized by having all the leaves unifoliate. I have not seen the specimens. *Loher 5710* and *5704* probably represent the same form, which is not uncommon in Luzon.

11. MICROMELUM Blume

MICROMELUM CURRANII Elm. Leaf. Philip. Bot. 2 (1908) 480.

Luzon (Bontoc, Benguet, Union), *Elmer 8530*, *Loher 5717*, *Merrill Phil. Pl. 1797*, *B. S. 37644*, *38010 Ramos & Edaña*. In thickets, altitude 1,200 to 1,450 m. Endemic.

Local name: Alas (Ig.).

MICROMELUM MINUTUM (Forst. f.) Seem. Mission Fiji (1862) 434, Fl. Vit. (1865) 31.

Limonia minuta Forst. f. Prodr. (1786) 33.

Micromelum pubescens Blume Bijdr. (1825) 137; Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 380; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 235; Vidal Sinopsis Atlas (1883) 18, t. 25, f. B; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 67, 3 (1908) Bot. 79, Sp. Blancoanae (1918) 200.

Bergera inodora Blanco Fl. Filip. (1837) 361.

Bergera koenigii Blanco op. cit. ed. 2 (1845) 254, ed. 3, 2 (1878) 108, non Linn.

Micromelum glabrescens Benth. in Hook. Journ. Bot. 2 (1843) 212; Walp. Repert. 5 (1845) 140; F.-Vill. Novis. App. (1880) 36.

Cookia ? *glabrescens* Miq. Fl. Ind. Bat. 1² (1858-59) 524; Walp. Ann. 7 (1868) 534.

Micromelum molle Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 380; Oliv. in Journ. Linn. Soc. Bot. 5 (1861) Suppl. 2: 41; F.-Vill. Novis. App. (1880) 36; Vidal Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 76.

Micromelum hirsutum F.-Vill. Novis. App. (1880) 36, non ? Oliv.

Bergera compressa Blanco Fl. Filip. (1837) 360, ed. 2 (1845) 254, ed. 3, 2 (1878) 107.

Andromeda japonica Blanco op. cit. 371, 261, 120, non Thunb.

Micromelum tephrocarpum Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 379; Oliv. in Journ. Linn. Soc. Bot. 5 (1861) Suppl. 2: 41; F.-Vill. Novis. App. (1880) 36; Vidal Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 76; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 26, Philip. Journ. Sci. 3 (1908) Bot. 412.

Micromelum compressum Merr. Sp. Blancoanae (1918) 200.

Throughout the Philippines, in most or all islands and provinces. Common in thickets and in secondary forests at low and medium altitudes.

India to southern China through Malaya to tropical Australia and Polynesia.

Local names: Amián (Ting.); ayu-ayu (Sul.); basar-básar (Ilk.); bialong (Sub.); binting-dalága (Tag.); buntog (Bik.); buringot (Bik.); gindoan (Bag.); hagasin (S. L. Bis.); karinbuboá (Ilk.); kalambahin (Tag.); kiting-kiting (Tag.); kulai-manók (Tag.); lamlamúyot (Ilk.); langin (Tag.); luyong-lúyong (Kuy.); makabangon (Bik.); malalúpai (Pamp.); maligang (Sub.); malimus (Mbo.); mayumud (Sul.); pait-pait (Sul.); panias-panias (C. Bis.); parinlas (Tag.); patukod-lángit (Tag.); piris (Tag.); pulót (Ibn.); tabas (P. Bis.); taboatkobing (Bag.); tulibas (Tag.).

This widely distributed species is variable in its indumentum ranging from nearly glabrous (*M. tephrocarpum* Turcz.=*M. compressum* Merr.) to softly pubescent (*M. molle* Turcz.); but I am now satisfied that but a single species is represented, after comparing a large series of specimens from India, Indo-China, China, Malaya, Australia, and Polynesia together with about 150 individual collections from the Philippines. Forster's type was from the Tonga or Friendly Islands.

12. MURRAYA Linnaeus

MURRAYA CRENULATA (Turcz.) Oliv. in Journ. Linn. Soc. Bot. 5 (1861) Suppl. 2: 29; F.-Vill. Novis. App. (1880) 36; Vidal Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 76; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 412.

Glycosmis crenulata Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 250.

Luzon (Union, Laguna, Rizal), Lobb 469, Merrill Phil. Pl. 1074, F. B. 22959 Calacosa, B. S. 15059 Ramos. On forested slopes at low and medium altitudes. Northeastern Australia, New Caledonia.

MURRAYA PANICULATA (Linn.) Jack in Malay Miscel. 1 (1820) 31; Merr. Interpret. Herb. Amb. (1917) 292, Sp. Blancoanae (1918) 201.

Chalcas paniculata Linn. Mant. 1 (1767) 68.

Chalcas camuneng Burm. f. Fl. Ind. (1768) 104.

Muraya exotica Linn. Mant. 2 (1771) 563; DC. Prodr. 1 (1824) 536; Miq. Fl. Ind. Bat. 1² (1858-59) 522; F.-Vill. Novis. App. (1880) 36; Vidal Sinopsis Atlas (1883) 18, t. 25, f. D, Rev. Pl. Vasc. Filip. (1886) 76; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 235; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 69, 3 (1908) Bot. 79, 412, Fl. Manila (1912) 269.

Connarus foetens Blanco Fl. Filip. (1837) 525.

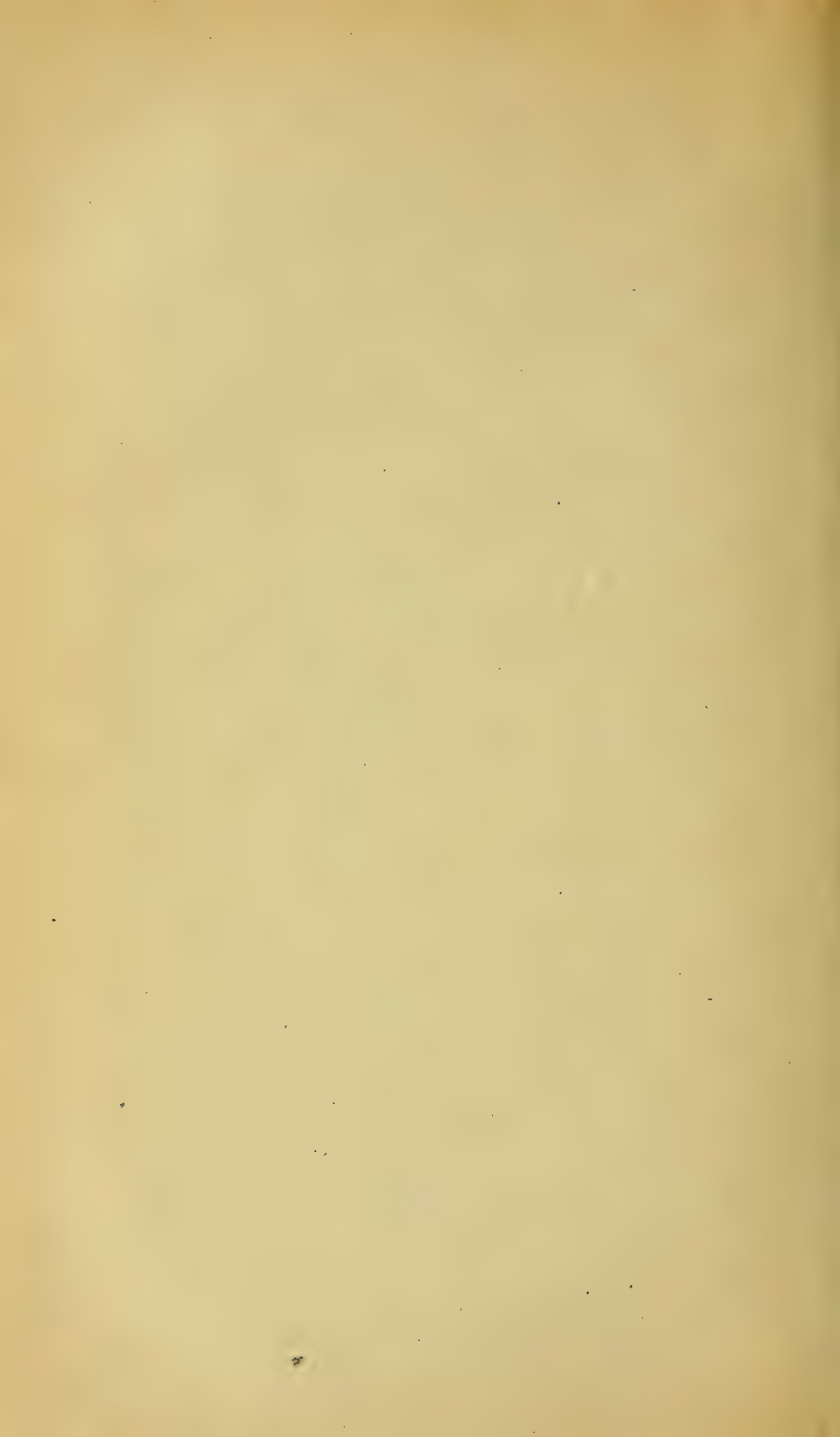
Connarus santaloides Blanco op. cit. ed. 2 (1845) 366, ed. 3, 2 (1879) 314, t. 155.

Muraya odorata Blanco Fl. Filip. ed. 2 (1845) 256, ed. 3, 2 (1878) 111.

Muraya banati Elm. Leaf. Philip. Bot. 8 (1915) 2812.

Batan Islands and northern Luzon to Palawan and Mindanao, in most or all islands and provinces, often common. In thickets and secondary forests at low and medium altitudes, sometimes planted. India to Malaya, now pantropic in cultivation.





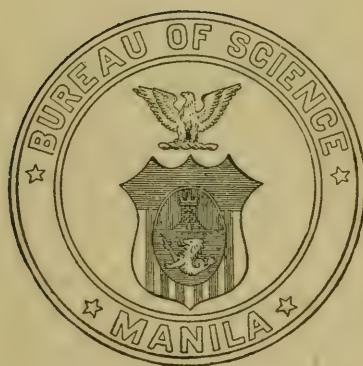
AN ENUMERATION OF PHILIPPINE FLOWERING PLANTS

BY

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EXPLANATORY NOTE

The present enumeration is an attempt to summarize in convenient form for consultation our present knowledge of Philippine flowering plants, and represents a part of the knowledge accumulated by the author during a course of about twenty years' study of the problem. In the work an attempt has been made to account for all binomials accredited to the Philippine flora; to adjust the synonymy when necessary; to include all important references to the Philippine botanical literature and essential references to extra-Philippine literature; to give the habitat, altitudinal range, and Philippine and extra-Philippine distribution of each species; to cite illustrative specimens where expedient or necessary; and to record all available local names for each species.

It is proposed to issue the present work in fascicles, utilizing one volume for the gymnosperms and the monocotyledons and two volumes for the dicotyledons. It is planned to publish full introductory and explanatory matter in a general introduction to be prefixed to Volume 1 when the entire enumeration is completed.

ELMER D. MERRILL.

MANILA, P. I., *August 25, 1921.*

Local names: Banásik (Ilk.); banaási (Ilk.); banaot (Sbl.); banási (Bik., Ibn.); banáti (C. Bis., Bik., Mag., Mbo.); kamúning (Tag., Bik., Bis., Pamp.); vanaii (Iv.).

EXCLUDED SPECIES

MURRAYA KOENIGII Spreng.; F.-Vill. Novis. App. (1880) 36.

13. *CLAUSENA* Burman f.

CLAUSENA ANISUM-OLENS (Blanco) Merr. in Govt. Lab. Publ. (Philip.)

17 (1904) 21, 27 (1905) 28, Philip. Journ. Sci. 1 (1906) Suppl. 69, 2 (1907) Bot. 431, Fl. Manila (1912) 269, Sp. Blancoanae (1918) 201.

Cookia anisum-olens Blanco Fl. Filip. (1837) 359.

Cookia anisodora Blanco op. cit. ed. 2 (1845) 253, ed. 3, 2 (1878) 106.

Clausena indica Vidal Sinopsis Atlas (1883) 18, t. 25, f. H, non Oliv.

Clausena warburgii Perk. Frag. Fl. Philip. (1905) 162.

Clausena excavata F.-Vill. Novis. App. (1880) 37, non Burm. f.

Clausena todayensis Elm. Leaf. Philip. Bot. 8 (1915) 2805.

Luzon (Bontoc, Benguet, Pampanga, Batangas, Bataan, Laguna, Rizal, Sorsogon), Masbate, Mindanao, Basilan, Merrill 7756, 2509, Phil. Pl. 1919, 1791, Sp. Blancoanae 1012, Elmer 5961, 10530, B. S. 13667, 23346 Ramos, 36677, 37978 Ramos & Edaño, F. B. 21989, 21377 Villamil, 1796, 1231, 3065 Borden, 27197 Udasco, 26151 Amarillas. In forests at low and medium altitudes, ascending to 1,500 m. Endemic.

Local names: Danglais (Bag.); kandulong (Sub.); kayumánis (Tag.); kalomáta (Tag.); kamañgianis (Tag.); maisipaísi (Tag.).

CLAUSENA EXCAVATA Burm. f. Fl. Ind. (1768) 87, t. 20; DC. Prodr. 1 (1824) 538; Vidal Rev. Pl. Vasc. Filip. (1886) 77; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 26.

Mindoro, Culion, Palawan, Sulu Archipelago, Merrill 673, 2207, Phil. Pl. 1265, Elmer 12782, F. B. 4143, 3602 Curran, B. S. 771, 827 Foxworthy. In thickets and old clearings at low altitudes. India to Indo-China and Malaya.

Local name: Buriñgit (Tagb.).

CLAUSENA GRANDIFOLIA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 294.

Palawan, Merrill 9544. On forested talus slopes, altitude about 800 m. Endemic.

CLAUSENA LANSIUM (Lour.) Skeels in U. S. Dept. Agr. Bur. Plant Ind. Bull. 176 (1909) 29; Merr. Sp. Blancoanae (1918) 201.

Quinaria lansium Lour. Fl. Cochinch. (1790) 272.

Cookia punctata Sonn. Voy. Ind. Or. 2 (1782) 231, t. 130, non *Clausena punctata* Voigt.

Cookia wampi Blanco Fl. Filip. (1837) 358, ed. 2 (1845) 253, ed. 3, 2 (1878) 105.

Clausena wampi Oliv. in Journ. Linn. Soc. Bot. 5 (1861) Suppl. 2: 34; F.-Vill. Novis. App. (1880) 36; Vidal Sinopsis Atlas (1883) 18, t. 25, f. I, Rev. Pl. Vasc. Filip. (1886) 77; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 28.

Clausena punctata Rehder & Wils. in Sargent Pl. Wils. 2 (1914) 140, non W. & A.

Blanco's description was based on specimens from a tree cultivated at Pasig, introduced from southern China. It is rare in cultivation.

Local names: Galumpi (Tag.); huampít (Tag.); uampí (Tag.); uampít (Tag.); all from its Chinese name.

CLAUSENA MOLLIS Merr. in Philip. Journ. Sci. 5 (1910) Bot. 181.

Luzon (Cagayan, Bontoc, Benguet, Nueva Vizcaya), *F. B.* 16530 Curran & Merritt, 28557 Cenabre, *B. S.* 7863 Ramos, 37928, 37876 Ramos & Edaño, *Elmer* 6352. In thickets and forests at medium altitudes, ascending to 1,200 m. Endemic.

CLAUSENA WORCESTERI Merr. in Philip. Journ. Sci. 5 (1910) Bot. 180.

Luzon (Cagayan), *B. S.* 10743 Worcester, *F. B.* 17247 Curran. In forests at low altitudes. Endemic.

Local name: Aromáta (Ibn.).

EXCLUDED SPECIES

CLAUSENA INDICA Oliv.; F.-Vill. Novis. App. (1880) 37.

CLAUSENA HEPTAPHYLLA W. & A.; F.-Vill. op. cit. 36.

CLAUSENA PENTAPHYLLA DC.; F.-Vill. l. c.

CLAUSENA WILLDENOWII W. & A.; F.-Vill. l. c.

14. LUVUNGA Hamilton

LUVUNGA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 233.

Mindanao (Lanao, Zamboanga), Palawan, *F. B.* 9104, 9267 Whitford & Hutchinson, Merrill 8139, Clemens 993. In primary forests at low and medium altitudes. Endemic.

LUVUNGA SCANDENS (Roxb.) Ham. in Wall. Cat. (1832) No. 6382.

Limonia scandens Roxb. Fl. Ind. ed. 2, 2 (1832) 380; Merr. in Philip. Journ. Sci. 9 (1914) Bot. 302.

Palawan, Merrill 9405. In primary forests at low altitudes. India to Indo-China and the Malay Peninsula.

15. TRIPHASIA Loureiro

TRIPHASIA TRIFOLIA (Burm. f.) P. Wils. in Torreyia 9 (1909) 33; N. Am. Fl. 25 (1911) 221; Merr. Fl. Manila (1912) 270, Sp. Blancoanae (1918) 202.

Limonia trifolia Burm. f. Fl. Ind. (1768) 103.

Limonia trifoliata Linn. Mant. 2 (1771) 237; Blanco Fl. Filip. (1837) 357, ed. 2 (1845) 252, ed. 3, 2 (1878) 103, t. 129.

Triphasia trifoliata DC. Prodr. 1 (1824) 536; Miq. Fl. Ind. Bat. 1² (1858-59) 519; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 234; F.-Vill. Novis. App. (1880) 37; Vidal Sinopsis Atlas (1883) 18, t. 25, f. C, Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 77.

Triphasia aurantiola Lour. Fl. Cochinch. (1790) 153; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 26.

Throughout the Philippines in the settled areas, in thickets, in some places gregarious and abundant; apparently introduced. Pantropic in cultivation, in many countries naturalized.

Local names: Kalamansito (Ilk., Ibn.) kamalitos (Tag.); limoncito (Sp.); limonsitong-kastila (Bik.); sua-sua (Bik.); suang-kastila (Bik.); tagimunau (Neg.).

16. PARAMIGNYA Wight

PARAMIGNYA LONGIPEDUNCULATA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 24.

Paramignya monophylla F.-Vill. Novis. App. (1880) 37; Vidal Rev. Pl. Vasc. Filip. (1886) 77; Ceron Cat. Pl. Herb. Manila (1892) 38, non Wight.

Atalantia longipedunculata Guillam. in Not. Syst. 1 (1910) 221.

Luzon (Pampanga, Rizal, Bataan, Laguna), Mindoro, *Merrill 1370, 7479, Phil. Pl. 39, Loher 234, F. B. 20664 Villamil, 2146 Ahern's collector, B. S. 14939, 39693 Ramos*. In forested ravines and in secondary forests at low and medium altitudes. Endemic.

Local names: Kalulut (Pamp.); tahid-labúyo (Tag.).

PARAMIGNYA MINDANAENSIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 140.

Mindanao (Lanao), *Clemens 591*. On forested slopes along streams, altitude about 700 m. Endemic.

17. WENZELIA Merrill

WENZELIA BREVIPES Merr. in Philip. Journ. Sci. 10 (1915) Bot. 273.

Leyte, Samar, Mindanao (Surigao), *Wenzel 1116, B. S. 24320 Ramos*. In damp forests, ascending to 500 m. A monotypic endemic genus; perhaps, however, with another representative in New Guinea, fide Dr. Swingle.

18. ATALANTIA Correa

ATALANTIA DISTICHA (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 28, Philip. Journ. Sci. 1 (1906) Suppl. 69, 3 (1908) Bot. 79, Sp. Blancoanae (1918) 202.

Limonia disticha Blanco Fl. Filip. (1837) 356.

Limonia corymbosa Blanco op. cit. ed. 2 (1848) 251, ed. 3, 2 (1878) 102.

Sclerostylis nitida Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 249.

Atalantia nitida Oliv. in Journ. Linn. Soc. Bot. 5 (1861) Suppl. 2: 25; Rolfe in Journ. Bot. 23 (1883) 211; Vidal Phan. Cuming. Philip. (1885) 100, Rev. Pl. Vasc. Filip. (1886) 77.

Atalantia racemosa F.-Vill. Novis. App. (1880) 37; Vidal Sinopsis Atlas (1883) 18, t. 25, f. G, non W. & A.

Triphasia monophylla A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 234, non DC.

Sclerostylis atalantioides A. Gray l. c. quoad *Cuming 991*, non W. & A.

Luzon (Cagayan to Sorsogon, all or most provinces), Mindoro, Panay, Guimaras, Negros, Masbate, Cebu, Leyte, Samar, Mindanao (Misamis). Often common in forests at low and medium altitudes, in Benguet ascending to 1,500 m. Endemic.

Local names: Dalárap (Sbl.); dáyap-ámo (Tag.); dáyap-dáyapan (Tag.); kaldemon (P. Bis.); kulkulnat (Pang.); kirikimit (Neg.); labiran (C. Bis.); malabak (Bik., Bis.); malakabuyau (Tag.); malaráyap (Tag.); malaráyat (Tag.); maladáyap (Tag.); malatúgan (Bik.); mañgatsápai (P. Bis.); panalayápan (Ilk.); sua-sua (C. Bis.); samon (P. Bis.).

ATALANTIA LINEARIS (Blanco) Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 200, 2 (1907) Bot. 431, Sp. Blancoanae (1918) 202.

Limonia linearis Blanco Fl. Filip. (1837) 357.

Limonia monophylla Blanco op. cit. ed. 2 (1845) 252, ed. 3, 2 (1878) 103, non Linn.

Atalantia monophylla F.-Vill. Novis. App. (1880) 37; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 28, non Corr.

Atalantia jagoriana Engl. in Engl. & Prantl Nat. Pflanzenfam. 3⁴ (1895) 192, *nomen nudum*, Bot. Jahrb. 21 (1906) Beibl. 54: 29.

Luzon (Bulacan, Rizal, Laguna, Tayabas), Samar, *Elmer* 12576, 18085, *Merrill* 5044, *Phil. Pl.* 72, *Sp. Blancoanae* 746, *B. S.* 9656 *Robinson*, 1783, 3301 *Ramos*. On ledges and rocky river banks along swift-running streams in places subject to overflow in the times of heavy rains. Endemic.

ATALANTIA MARITIMA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 293.

Sclerostylis atalantioides A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 234, excl. *Cuming* 991, non W. & A.

Apo, Palawan, Negros, Panay, Ticao, Bohol, Dinagat, Mindanao (Zamboanga), Sulu Archipelago, *F. B.* 26991 *Fernandez*, 25895 *Tamesis* & *Azurin*, 21896 *Villamil*, 1060 *Clark*, 3796 *Curran*, *B. S.* 32414, 32198 *McGregor*, 31525 *Ramos* & *Edaño*, 35230 *Ramos* & *Pascasio*, 178 *Bermijos*, 1278 *McGregor*, 623 *Foxworthy*. In beach forests, borders of mangrove swamps, etc. Endemic.

Local name: Kurukabúyau (P. Bis.).

ATALANTIA RETUSA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 200, 3 (1908) Bot. 79.

? *Atalantia monophylla* A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 234, non DC.

Mindoro, Palawan, Panay, *Elmer* 12912, *B. S.* 21279 *Escritor*, *F. B.* 3609 *Curran*. In old clearings, second-growth forests, etc., at low altitudes. Endemic.

EXCLUDED SPECIES

ATALANTIA CAUDATA Hook. f.; F.-Vill. Novis. App. (1880) 37.

ATALANTIA MONOPHYLLA Corr.; Vidal Rev. Pl. Vasc. Filip. (1886) 77.

19. CHAETOSPERMUM (Roem.) Swingle

CHAETOSPERMUM GLUTINOSUM (Blanco) Swingle in Journ. Wash. Acad. Sci. 3 (1913) 102; Merr. Sp. Blancoanae (1918) 203.

Limonia glutinosa Blanco Fl. Filip. (1837) 358.

Feronia ternata Blanco op. cit. ed. 2 (1845) 252, ed. 3, 2 (1878) 104, t. 124.

Aegle decandra Naves ex F.-Vill. Novis. App. (1880) 38; Vidal Cat. Pl. Prov. Manila (1880) 21, Sinopsis Atlas (1883) 18, t. 25, f. j; Ceron Cat. Pl. Herb. Manila (1892) 39; Merr. Sp. Blancoanae (1918) 19.

Aegle glutinosa Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 12, 27 (1905) 29, Fl. Manila (1912) 271.

Limonia engleriana Perk. Frag. Fl. Philip. (1905) 163.

Belou glutinosa Skeels in U. S. Dept. Agr. Bur. Pl. Ind. Bull. 162 (1909) 26.

Luzon (Isabela to Tayabas). In thickets and secondary forests at low and medium altitudes. An endemic monotypic genus.

Local names: Boyag (Tag.); kabúyau-áso (Tag.); kabúyok (Ilk.); kalandán (Ibn.); tabóg (Tag.); tabók (Tag.); talubok (Tag.); urátan (Ilk.); malakabúyau (Tag.).

20. CITRUS * Linnaeus

CITRUS AURANTIFOLIA (Christm.) Swingle in Journ. Wash. Acad. Sci. 3 (1913) 465; Merr. Interpret. Herb. Amb. (1917) 296, Sp. Blancoanae (1918) 203.

Limonia aurantifolia Christm. Pflanzensyst. 1 (1777) 618.

Limonia acidissima Houtt. Nat. Hist. II 2 (1774) 444, non Linn.

Limonia spinosum Mill. Gard. Dict. ed. 8 (1768), non *Citrus spinosa* Gmel.

Citrus lima Lunan Hort. Jamaic. (1814) 451; Merr. Fl. Manila (1912) 271.

Citrus javanica Blume Bijdr. (1825) 140; Usteri Beitr. Ken. Philip. Veg. (1905) 113.

Citrus acida Roxb. Fl. Ind. ed. 2, 3 (1832) 390, non ? Pers.

Citrus notissima Blanco Fl. Filip. (1837) 607, ed. 2 (1845) 424, ed. 3, 2 (1879) 406.

Citrus limetta Risso var. *aromatica* Wester in Philip. Agr. Review 8 (1915) 25.

Citrus excelsa Wester in Philip. Agr. Review 8 (1915) 26, incl. var. *davaoensis* Wester l. c.

Throughout the Philippines in the settled areas, usually planted. Pan-tropic, but native of the Indo-Malayan region, although apparently not a native of the Philippines. The lime.

Local names: Bilolo (Tag.); daláya' (Ibn.); daláyap (Ilk.); dáyap (Tag.); dulugot (Neg.); gorong-gorong (Ilk.); gugulo (If.); limón (Sp.); muyong (Bon.); suá (Bik.).

* Following horticultural rather than strictly botanical usage the orange, the mandarin orange, the lime, the lemon, the citron, and the pomelo are here enumerated as species. It is highly probable that some of these fruits are of hybrid origin. In essential characters they are certainly no more distinct from each other than are some of the species recently proposed by Wester. I can see no really valid reasons for considering the sweet and sour oranges and the mandarin orange as other than forms of a single species. Without exception Wester's species were based on cultivated plants and are, I believe, simple or complex hybrids or at most varieties of older species. It is a well-known fact that the various *Citrus* species freely hybridize. The only strictly native species in the Philippines is apparently *Citrus hystrix* DC.

Citrus gaoganensis Hayata, *C. limonelloides* Hayata, *C. depressa* Hayata, *C. tankan* Hayata, *C. natsudaoidai* Hayata, and *C. kotokan* Hayata, all recently described from Formosan material, Ic. Pl. Formos. 8 (1919) 14-31, are, I believe, not true species but merely hybrids.

Var. **MIARAY** (Wester) comb. nov.

Citrus miaray Wester in Philip. Agr. Review 10 (1917) 457.

Mindanao (Bukidnon), Wester. Cultivated.

Local name: Miarai (Buk.).

Citrus miaray Wester, here reduced as a variety of *C. aurantifolia* Swingle, is probably a hybrid between *C. aurantifolia* and some other species. Of Wester's species I have seen only specimens with very young fruits. *Citrus excelsa* Wester is apparently also a hybrid with *C. aurantifolia* Swingle as one of its parents.

CITRUS AURANTIUM Linn. Sp. Pl. (1753) 783; Blanco Fl. Filip. (1837) 609, ed. 2 (1845) 425, ed. 3, 2 (1879) 408; F.-Vill. Novis. App. (1880) 37; Wester in Philip. Agr. Review 8 (1915) 9; Merr. Sp. Blancoanae (1918) 204.

Citrus vulgaris Risso in Ann. Mus. Hist. Nat. Paris 20 (1813) 190; Wester in Philip. Agr. Review 8 (1915) 10.

Citrus longispina Wester in Philip. Agr. Review 8 (1915) 15, t. 2a, 3a.

Citrus sinensis Osbeck Reise Ostind. China (1765) 148; Swingle Pl. Wils. 2 (1917) 148.

Throughout the Philippines, usually or always planted; all warm countries, but native of the Old World. The sweet and sour orange.

Local names: Dalandán (Tag.); cajel (Tag., Bik., Ibn., Bis.); talamisan (C. Bis.); tamisan (C. Bis.); valachinuk (Iv.); volatino (Iv.).

Citrus longispina Wester, which I refer to *C. aurantium* Linn., is perhaps hybrid between *Citrus aurantium* and some other species.

CITRUS HYSTRIX DC. Cat. Hort. Monsp. (1813) 97; Prodr. 1 (1824) 359; F.-Vill. Novis. App. (1880) 37; Vidal Synopsis Atlas (1883) 18, t. 25, f. F, Rev. Pl. Vasc. Filip. (1886) 77; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 70, 3 (1908) Bot. 412, Sp. Blancoanae (1918) 204, var.; Wester in Philip. Agr. Review 8 (1915) 17, t. 5b, f. l.

Northern Luzon to Palawan and Mindanao, in most or all islands and provinces. In secondary and primary forests, sometimes in or near settlements, at low and medium altitudes, often rather common and truly native of the Archipelago. Widely distributed in the Malayan region.

Local names: Amongpong (C. Bis.); amontau (C. Bis.); buyak (Tag.); buyog (Tag.); daruga (Sul.); duroga (Sul.); kabúgau (Tag.); kabuan (Tag.); kalo-oi (C. Bis.); kabog (Bik.); kabúyau (Tag.); kamúgau (Ilk.); kapitán (Ilk., Ibn.); kamúlau (Ilk.); kamuntai (Bik.); kopalían (C. Bis.); kobot (Tag.); kolobot (Tag., Bis.); kolison (Bis.); kolong-kolong (Tag.); malatbas (Sbl.); mayagarin (C. Bis.); muntai (Sub.); piris (Pang.); pinukpuk (Klg.).

The type of *Citrus hystrix* DC. (*hystrix*) was a sterile specimen from a tree cultivated at Montpelier, originating in Mauritius. It may well have been of Malayan origin. *Citrus papeda* Hassk. is doubtless the same.

Var. **BOHOLENSIS** Wester in Philip. Agr. Review 8 (1915) 19, t. 4a, 5a.

Bohol, Wester 4824, 2525, cultivated. This is clearly but a slight variant of *C. hystrix* DC. and is apparently very close to if not identical with *Citrus celebica* Koord. in Meded. Lands Plant. 19 (1898) 370, 639, Koorders 18751 β !

Var. MACROPHYLLA (Wester) comb. nov.

Citrus macrophylla Wester in Philip. Agr. Review 8 (1915) 16, t. 3b, 6c.

Cebu, Wester 4820. Cultivated. This is in all probability a hybrid between *Citrus hystrix* DC. and some other species, perhaps *C. maxima* (Burm.) Merr.

Local name: Alimau (C. Bis.).

Var. MICRANTHA (Wester) comb. nov.

Citrus micrantha Wester in Philip. Agr. Review 8 (1915) 20 t. 5c, 6b, 7c.

Cebu, Bohol, Negros, Mindanao (Misamis, Zamboanga). Sparingly cultivated. Apparently merely a form of *Citrus hystrix* DC. or perhaps a hybrid between it and *C. aurantifolia* Swingle.

Local names: Biasong (C. Bis.); balinkolong (C. Bis.).

Var. MICROCARPA (Wester) comb. nov.

Citrus micrantha Wester var. *microcarpa* Wester op. cit. 21, t. 7b.

Cebu, Bohol. Cultivated for its very fragrant fruits which are from 1.5 to 2 cm in diameter.

Local name: Samuyau (C. Bis.).

Var. SOUTHWICKII (Wester) comb. nov.

Citrus southwickii Wester in Philip. Agr. Review 8 (1915) 16, t. 3c, 4c.

Citrus limao Wester l. c. sub. t. 3c.

Bohol, Mindanao (Surigao). Occasionally cultivated. Apparently but a variety of *Citrus hystrix* DC. or perhaps but a hybrid between it and some other species.

Local name: Limau (C. Bis.).

Var. TOROSA (Blanco) Wester in Philip. Agr. Review 8 (1915) 19.

Citrus torosa Blanco Fl. Filip. (1837) 609, ed. 2 (1845) 425, ed. 3, 2 (1879) 407, t. 408; Merr. Sp. Blancoanae (1918) 204.

Scattered here and there in the settled areas, and in secondary forests; characterized by its very rough fruits, *Merrill Sp. Blancoanae* 46, *Phil. Pl.* 1092.

Local name: Kolobot (Tag.).

CITRUS LIMONIA Osbeck Reise Ostind. China (1765) 250; Swingle in Sargent Pl. Wils. 2 (1916) 146.

Citrus limonum Risso in Ann. Mus. Paris 20 (1813) 201; Wester in Philip. Agr. Review 8 (1915) 24.

Rarely cultivated, the fruits rather inferior. All warm countries. The lemon.

Var. PSEUDOLIMONUM (Wester) comb. nov.

Citrus pseudolimonum Wester in Philip. Agr. Review 8 (1915) 24, t. 7a.

Siquijor, Bohol. Occasionally planted; perhaps a hybrid between *Citrus limonia* Osbeck and some other species.

Local names: Kolokolo (C. Bis.); kunot (C. Bis.); lombog (C. Bis.).

CITRUS MAXIMA (Burm.) Merr. Interpret. Herb. Amb. (1917) 296, Sp. Blancoanae (1918) 204.

Aurantium maximum Burm. Auctuarium Herb. Amb. (1755) 16.

Citrus grandis Osbeck Dagbok Ostind. Resa (1757) 98; Swingle in Sargent Pl. Wils. 2 (1914) 144.

Citrus aurantium grandis Linn. Sp. Pl. (1753) 783.

Citrus aurantium decumana Linn. Sp. Pl. ed. 2 (1763) 1101.

Citrus decumana Linn. Syst. ed. 12 (1767) 508; Blanco Fl. Filip. (1837) 608, ed. 2 (1845) 424, ed. 3, 2 (1879) 406, t. 304; F.-Vill. Novis. App. (1880) 38; Merr. Fl. Manila (1912) 271; Wester in Philip. Agr. Review 8 (1915) 11 (incl. var. *panuban* Wester op. cit. 12).

Throughout the Philippines in the settled areas, usually planted; probably not a native of the Archipelago. All warm countries, but native of the Old World. The pomelo.

Local names: Gunal (Ting.); luban (If.); lubbán (Ibn.); lukban (Tag., Bik., Ilk.); panubang (Bon.); súha (Tag.); suá (Ilk.); taboyog (Bon.).

CITRUS MEDICA Linn. Sp. Pl. (1753) 782; F.-Vill. Novis. App. (1880) 37; Vidal Rev. Pl. Vasc. Filip. (1886) 78, Phan. Cuming. Philip. (1885) 100; Wester in Philip. Agr. Review 8 (1915) 22, incl. var. *nana* Wester l. c., and var. *odorata* Wester l. c. t. 7a.

Occasionally planted, but nowhere spontaneous. The citron.

Local names: Bulíð (Tag., Bik.); cidro (Sp.); sidras (Bis., Bik.); ti-hi-tihi (C. Bis.).

CITRUS MITIS Blanco Fl. Filip. (1837) 610, ed. 2 (1845) 426, ed. 3, 2 (1879) 409, t. 185; Merr. Fl. Manila (1912) 270, Sp. Blancoanae (1918) 204; Wester in Philip. Agr. Review 8 (1915) 12.

Citrus medica Linn. var. *limetta* F.-Vill. Novis. App. (1880) 37; Vidal Sinopsis Atlas (1883) 18, t. 25, f. E, non Hook. f.

Scattered here and there in cultivation but not known wild; southern Japan and China, introduced in tropical America and the southern United States.

Local names: Aldonisis (Tag.); kalamondín (Tag.); kalamansi (Tag.).

CITRUS NOBILIS Lour. Fl. Cochinch. (1790) 466; Vidal Cat. Pl. Prov. Manila (1880) 21; Wester in Philip. Agr. Review 8 (1915) 10; Merr. Sp. Blancoanae (1918) 203.

Citrus reticulata Blanco Fl. Filip. (1837) 610, ed. 2 (1845) 425, ed. 3, 2 (1879) 408.

Citrus deliciosa Ten. Ind. Sem. Hort. Bot. Neapal. (1840) 9.

Citrus nobilis Lour. var. *deliciosa* Swingle in Sargent Pl. Wils. 2 (1914) 143.

Citrus papillaris Blanco Fl. Filip. (1837) 160, ed. 2 (1845) 425, ed. 3, 2 (1879) 409.

Citrus nobilis Lour. var. *papillaris* Wester in Philip. Agr. Review 8 (1915) 11.

Citrus aurantium Linn. var. *mandarinum* Perr. in Mém. Soc. Linn. Paris 3 (1824) 110; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 305.

Citrus aurantium Linn. var. *bergamina* F.-Vill. Novis. App. (1880) 37, non Hook. f.

Citrus webberi Wester in Philip. Agr. Review 8 (1915) 13, incl. var. *montana* Wester op. cit. 14.

Widely scattered in cultivation, but planted on a large scale in Batangas Province, Luzon. All warm countries but probably a native of southern China. Perhaps not specifically distinct from *Citrus aurantium* Linn. The loose-skinned or mandarin orange.

Local names: Alsem (Bon.); daraṅgita (Ilk.); naranjita (Sp.); dalaṅgita (Tag.); ránsas (Bik.); sintonis (Tag.); tison (Tag.).

Citrus webberi Wester, here reduced to *C. nobilis* Lour., may be a hybrid between *C. nobilis* Lour. and *C. hystrix* DC.

EXCLUDED SPECIES

CITRUS MADURENSIS Lour.; F.-Vill. Novis. App. (1880) 38.

This is *Fortunella japonica* (Thunb.) Swingle, and does not occur in the Philippines.

EXCLUDED GENERA

FERONIA ELEPHANTUM Correa; F.-Vill. Novis. App. (1880) 38=*Feronia limonia* (Linn.) Swingle.

The wood apple is not a native of the Philippines; it is now cultivated at the Agricultural Station at Lamao, Bataan Province, Luzon.

RUTA GRAVEOLENS Linn.; F.-Vill. Novis. App. (1880) 34.

This European plant is very rarely cultivated in Manila gardens; it has no claims to be considered as a Philippine species.

CASIMIROA EDULIS La Llave.

A native of Mexico, recently introduced and cultivated at Lamao.

SIMARUBACEAE

1. SURIANA Plumier

SURIANA MARITIMA Linn. Sp. Pl. (1753) 284; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 307; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 274.

Lumbacan (Sulu Sea), *Merrill Phil. Pl. 403*. On sandy seashores. A pantropic strand plant, yet often very local, in the Old World chiefly on small isolated islands.

2. SAMADERA Gaertner

SAMADERA INDICA Gaertn. Fruct. 2 (1791) 352, t. 156; F.-Vill. Novis. App. (1880) 38; Vidal Sinopsis Atlas (1883) 19, t. 26, f. C, Phan. Cuming. Philip. (1885) 101, Rev. Pl. Vasc. Filip. (1886) 78; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 29, Sp. Blancoanae (1918) 206.

Manungala pendula Blanco Fl. Filip. (1837) 306.

Notia tetrapetala Poir. in Lam. Encycl. 4 (1798) 490; Blanco Fl. Filip. ed. 2 (1845) 213, ed. 3, 2 (1878) 35.

Luzon (Cagayan), Mindoro, Palawan, Mindanao (Lanao), *F. B. 27227 Peñas, 11879 Amarillas, 4061, 3738 Merritt, 12208 Rosenbluth, 3819 Curran, 25498 Cruz, 23136 Acuña*. In forests at low altitudes. India to Malaya.

Local names: Daraput (Bis.); linatog-anat (Bis.); linton-gamai (Bis.); malunḡgál (Tag.); manunḡgál (Tag., Bik., Pamp., P. Bis., Lan., Ibn.); mónḡgal (Tag.); mabingdato (Bis.); palagarium (Bis.); palagium (Bis.); ponoan (Bis.).

3. QUASSIA Linnaeus

QUASSIA AMARA Linn. Sp. Pl. ed. 2 (1762) 552; F.-Vill. Novis. App. (1880) 38; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904), Fl. Manila (1912) 272.

Occasionally cultivated in Manila and in other towns for ornamental purposes; a native of tropical America.

Local name: Corales (Sp.).

4. EURYCOMA Jack

EURYCOMA EGLANDULOSA Merr. in Philip. Journ. Sci. 17 (1920) 266.

Mindanao (Surigao), Dinagat, *B. S. 34592, 35207 Ramos & Pascasio*. In forests at low altitudes. Endemic.

EXCLUDED SPECIES

EURYCOMA LONGIFOLIA Jack; F.-Vill. Novis. App. (1880) 39; Vidal Rev. Pl. Vasc. Filip. (1886) 78.

The Philippine reference was based on a specimen collected by Lobb in the Malay Peninsula or Borneo and erroneously localized as Philippine.

5. HARRISONIA R. Brown

HARRISONIA BROWNEI A. Juss. in Mém. Mus. Paris 12 (1825) 540; Gaudich. Bot. Freyc. Voy. (1826) *t. 103*; Walp. Ann. 1 (1848) 165; Miq. Fl. Ind. Bat. 1² (1858-59) 677; F.-Vill. Novis. App. (1880) 39; Vidal Rev. Pl. Vasc. Filip. (1886) 78, Phan. Cuming. Philip. (1885) 101.

Palawan, Cebu, Siquijor, Bohol, Mindanao (Zamboanga, Cotabato), *Cuming 1780, 1828, B. S. 186 Bermejos, 887 Foxworthy, 11083 Ramos, 1269 McGregor, 11740, 16397 Reillo, Merrill Phil. Pl. 1173, F. B. 19892 Danao, 19002 Everett, 18282 Miranda*. In thickets and forests at low altitudes. Andaman Islands, Timor, tropical Australia.

Local names: Kankasira (Tagb.); malomanhak (C. Bis.).

HARRISONIA PERFORATA (Blanco) Merr. in Philip. Journ. Sci. 7 (1912) Bot. 236, Fl. Manila (1912) 272, Sp. Blancoanae (1918) 206.

Paliurus perforatus Blanco Fl. Filip. (1837) 174, ed. 2 (1845) 122, ed. 3, 1 (1877) 220.

Paliurus dubius Blanco op. cit. 175, 123, 221.

Fagara piperita Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t. 23*, non Linn.

Lasiolepis paucijuga Benn. Pl. Jav. Rar. (1844) 202, *t. 42*; Miq. Fl. Ind. Bat. 1² (1855-56) 678.

Lasiolepis multijuga Benn. l. c.

Harrisonia bennetii Hook. f. Fl. Brit. Ind. 1 (1875) 519; F.-Vill. Novis. App. (1880) 39 (incl. var. *paucijuga* F.-Vill. et *multijuga* F.-Vill.); Vidal Sinopsis Atlas (1883) 19, *t. 26, f. A*, Phan. Cuming. Philip. (1885) 101, Rev. Pl. Vasc. Filip. (1886) 78.

Harrisonia citrinaccarpa Elm. Leaflet. Philip. Bot. 8 (1915) 2828.

Luzon (Ilocos Sur, Nueva Vizcaya, Pangasinan, Rizal, Batangas), Samar, Mindanao, *Merrill 3001, 2687, 1718, Phil. Pl. 300, Elmer 13448, F. B. 7215 Curran, 3140 Ahern's collector*. In thickets at low altitudes. Burma to southern China and Java.

Local names: Asimau (Tag.); bákit (Ilk., Pang.); dagiangas (Mbo.); kamuñgi (Sul.); laiya (Tag.); mamígil (Tag.); muntani (Bis.); sapleng (Sbl.); sapsapáng (Ilk.).

6. BRUCEA J. F. Miller

BRUCEA AMARISSIMA (Lour.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 18.

Gonus amarissimus Lour. Fl. Cochinch. (1790) 658.

Brucea sumatrana Roxb. Hort. Beng. (1814) 12, Fl. Ind. 1 (1820) 469; Miq. Fl. Ind. Bat. 1² (1858-59) 680; F.-Vill. Novis. App. (1880) 39; Vidal Phan. Cuming. Philip. (1885) 101, Rev. Pl. Vasc. Filip. (1886) 78; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 27.

Luzon (Pangasinan), Leyte, Palawan, Negros, Mindanao (Surigao, Bukidnon, Cotabato, Misamis), Basilan, *F. B. 26145 Hirro, 17963 Miranda B. S. 16329 Reillo, 24956 Fénix, 11503 Robinson, Ahern 512, Wenzel 1913*. In thickets at low altitudes. India to southern China through Malaya to Australia.

Local names: Balaniog (Chab.); bogo-bogo (P. Bis., C. Bis.); magkawayos (S. L. Bis.); manongao-bobi (C. Bis.); selte (Yak.).

BRUCEA MACROBOTRYS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 19.

Samar, Panay, *Merrill Phil. Pl. 1626, B. S. 31398, 31052, 30827 Ramos & Edaño*. In forests along small streams at low altitudes. Endemic.

BRUCEA MOLLIS Wall. Cat. (1848) No. 8483; Benn. in Hook. f. Fl. Brit. Ind. 1 (1875) 521; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 104.

Brucea luzoniensis Vidal Sinopsis Atlas (1883) 19, t. 26, f. B; Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 26, Philip. Journ. Sci. 1 (1906) Suppl. 70.

Brucea membranacea Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 70.

Northern Luzon (Cagayan) to Mindanao. In forests at low and medium altitudes; common. India.

Local names: Makamara (Tag.); suga (Ig.).

BRUCEA STENOPHYLLA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 274.

Luzon (Benguet), *F. B. 26396 Oteyza & Garcia, 22903 Leaño*. In thickets along small streams, altitude about 1,500 m. Endemic.

7. PICRASMA Blume

PICRASMA JAVANICA Blume Bijdr. (1825) 247; Miq. Fl. Ind. Bat. 1² (1858-59) 679; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 27.

Picrasma philippinensis Elm. Leaf. Philip. Bot. 5 (1913) 1837.

Palawan, Leyte, Mindanao, *Elmer 13094, 10841, Ahern 557, 696, Clemens 536, B. S. 15221 Ramos, F. B. 26595 Sandique*. In forests at low and medium altitudes. India to Malaya.

Local names: Nalis (Sul.); palumpang (Bag.).

8. **HEBONGA** Radlkofer

HEBONGA MOLLIS Radlk. in Philip. Journ. Sci. 6 (1911) Bot. 367; Boas Beitr. Anat. Syst. Simarub. (1912) 49, Fedde Repert. 13 (1914) 290.

Mindanao (Zamboanga), *F. B. 9443 Whitford & Hutchinson*. In forests at low altitudes. Endemic.

HEBONGA OBLIQUA Radlk. in Philip. Journ. Sci. 6 (1911) Bot. 366; Boas Beitr. Anat. Syst. Simarub. (1912) 49, Fedde Repert. 13 (1914) 290.

Mindoro, *Merrill 2176, Hickman 6*. In forests at low altitudes. The material is very incomplete and is remarkably suggestive of *Ailanthus philippinensis* Merr.; the fruits are unknown. Endemic. A third species of the genus occurs in Siam.

Local name: Hebong (Tag.).

9. **AILANTHUS** Desfontaines

AILANTHUS BLANCOI Merr. Sp. Blancoanae (1918) 205.

Ailanthus pongelion Blanco Fl. Filip. (1837) 380, ed. 2 (1845) 268, ed. 3, 2 (1878) 134, non Gmel.

Ailanthus malabarica F.-Vill. Novis. App. (1883) 349, non DC.

Luzon (Laguna), *F. B. 20881 Villamil, 2500 Mabesa, 22337 Mariano, 20350 Celestino, Merrill Sp. Blancoanae 606*. In forests and along mountain streams at low altitudes. Endemic.

Local names: Balokas (Tag.); makaisa (Tag.); malasapsáp (Tag.).

AILANTHUS PHILIPPINENSIS Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 25, Philip. Journ. Sci. 1 (1906) Suppl. 70, 2 (1907) Bot. 431, excl. syn. Blanco.

Ailanthus moluccanus Merr. in Philip. Bureau Forestry Bull. 1 (1903) 27, non DC.

Luzon (Laguna, Camarines, Tayabas), Palawan, *Merrill 2137, Ahern 93, F. B. 3847 Curran, 20972, 20973 Villamil*. In forests at low altitudes. Endemic.

Local names: Empau (Tagb.); kalauag (Bik.); malaaduás (Tag.); makaisa (Tag.).

BURSERACEAE1. **PROTIUM** Burman f.

PROTIUM CONNARIFOLIUM (Perk.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 30.

Canarium connarifolium Perk. Frag. Fl. Philip. (1904) 92.

Protium philippinense Elm. Leaf. Philip Bot. 7 (1915) 2571.

Palawan, *B. S. 548, 866, 737, 753, 754 Foxworthy, F. B. 21604 Agama, Merrill 787, Elmer 12760, 13225*. In forests along streams at low altitudes. Endemic.

Local name: Marañgub (Tagb.).

2. CANARIUM Linnaeus

CANARIUM AGUSANENSE Elm. Leaf. Philip. Bot. 7 (1915) 2564.

Samar, Mindanao (Agusan), *Elmer* 73275, *B. S.* 24385, 24497 *Ramos*. In forests at low and medium altitudes. Endemic.

Local names: Binsauan (Mbo.); milipiliai (S. L. Bis.).

CANARIUM AHERNIANUM Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 70.

Luzon (Bataan, Rizal, Laguna, Sorsogon), *F. B.* 123 *Barnes*, 422 *Ahern's collector*, 19958 *Villamil*, *B. S.* 22833 *McGregor*, 2654 *Ramos*, *Merrill Phil. Pl.* 1930, *Whitford* 1254, *Williams* 363, *Elmer* 15527, 17093. In primary forests at low altitudes. Endemic.

CANARIUM APOENSE Elm. Leaf. Philip. Bot. 3 (1911) 1083.

Mindanao (Davao), *Elmer* 11638. In forests, altitude about 1,200 m. Endemic.

Local name: Ogát (Bag.).

CANARIUM BARNESII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 22.

Luzon (Sorsogon), Masbate, *Merrill* 2617, *Elmer* 15659, *B. S.* 23634 *Ramos*. In forests at low altitudes. Endemic.

Local names: Milipili (P. Bis.); pili-pili (Bik.).

CANARIUM CALOPHYLLUM Perk. Frag. Fl. Philip. (1904) 91.

Luzon (Ilocos Norte, Benguet, Pangasinan, Tayabas, Bataan, Laguna, Batangas, Rizal), *Merrill* 1858, *Phil. Pl.* 480, *Williams* 1373, *Elmer* 9234, *F. B.* 24218 *Lopez*, 25422 *Duldulao*, 25403 *Labitag*, 17622 *Curran*, 12969, 12927 *Alvarez*, 22978 *Adduru*. In forests at low and medium altitudes. Endemic.

Local names: Antén (Ilk.); bakiáu (Pang.); chaiket (Ig.); pagsahingin-maliit (Tag.); pilauai bulog (Tag.).

CANARIUM CLEMENTIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 142.

Canarium clementis Merr. var. *perumbrinum* Elm. Leaf. Philip. Bot. 3 (1911) 1078.

Mindanao (Lanao, Davao), *Clemens* 759, 1175, *Elmer* 11730, *F. B.* 25263 *Alvarez*. In forests, altitude 700 to 1,200 m. Endemic.

Local names: Ogát (Bag.); pulutan (Lan.).

CANARIUM COMMUNE Linn. Mant. 1 (1767) 127; Engl. in DC. Monog. Phan. 4 (1883) 112; Merr. Interpret. Herb. Amb. (1917) 301.

Mindanao (Zamboanga), *B. S.* 29255 *Wester*; a single tree in Talisayan said to have been grown from seeds brought from the Moluccas. Malay Archipelago.

CANARIUM COSTULATUM Elm. Leaf. Philip. Bot. 3 (1911) 1080.

Mindanao (Davao), *Elmer* 11215. On forested ridges, altitude about 1,000 m. Endemic.

Local name: Kalaua (Bag.).

CANARIUM DOLICHOPHYLLUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 20.

Mindanao (Butuan), *F. B. 20749 Rafael & Ponce*. In secondary forests at low altitudes; doubtfully distinct from *C. williamsii* C. B. Rob. Endemic.

CANARIUM ELLIPSOIDEUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 26.

Luzon (Bulacan, Laguna), *B. S. 21968 Ramos, F. B. 28233 Salvosa & Masias*. In forests at low altitudes. Endemic.

CANARIUM EUPHLEBIUM Merr. in Philip. Journ. Sci. 8 (1913) Bot. 372.

Samar, Leyte, Cebu, Panay, *Wenzel 293, 388, 1394, 1725, F. B. 6447 Everett, 24585 Phasis, B. S. 31124 Ramos & Edaña*. In forests at low and medium altitudes. Endemic.

CANARIUM EURYPHYLLUM Perk. Frag. Fl. Philip. (1904) 99.

Luzon (Tayabas, east coast), *Merrill 1045, 1081*. In forests at low altitudes. Endemic.

Local names: Mayakyat (Tag.); tabuali (Tag.).

CANARIUM GRACILE Engl. in DC. Monog. Phan. 4 (1883) 140; Vidal Phan. Cuming. Philip. (1885) 101, Rev. Pl. Vasc. Filip. (1886) 80; Perk. Frag. Fl. Philip. (1904) 93; Elm. Leaf. Philip. Bot. 3 (1911) 1078.

Santiria sp.; Vidal Sinopsis Atlas (1883) 19, t. 28, f. C.

Northern Luzon (Cagayan) to Mindanao incl. *Elmer 15823* as *C. sorogonense* Elm. and *16133* as *C. antonii* Elm. In primary forests at low and medium altitudes. Endemic.

Local names: Gisauan (Mbo.); kiod (Mbo.); pagsahingán-dágit (Tag.); palaspas (Tag.); patsahingín (Tag.); piling-okai (Bik.); piling-langgam (Tag., P. Bis.); sahing-sáhing (Mang.); salong-igbabau (P. Bis.); tiui (Tag.); tumagasag (Bag.).

CANARIUM HETEROPHYLLUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 19.

Luzon (Cagayan, ? Laguna), *B. S. 13878 Ramos, ? Elmer 18312*. In forests at low altitudes. Endemic.

CANARIUM LACINIATUM Elm. Leaf. Philip. Bot. 3 (1911) 1084.

Canarium fuscum C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 185, non Engl.

Mindanao (Surigao, Agusan, Butuan, Lamac, Davao, Zamboanga), *Basilan, Elmer 11122, 13291, Williams 2181, 2870, Wenzel 1832, F. B. 20742 Rafael & Ponce, 15446 Pray, 18843 Miranda, 25809 Teeson & Roque*. In forests at low and medium altitudes.

Local names: Kalisau (Mbo.); lancha-lancha (Sul.); lankaŋgan (Lan.); ogat (Bag.).

CANARIUM LAGUNENSE Merr. in Philip. Journ. Sci. 10 (1915) Bot. 21.

Luzon (Laguna), *B. S. 14945, 20579, 20468 Ramos, F. B. 19722 Barber*. In forests at low altitudes. Endemic.

Local name: Pagsahingín (Tag.).

CANARIUM LUCIDUM Perk. Frag. Fl. Philip. (1904) 94; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 171.

Calophyllum sibuyanense Elm. Leaf. Philip. Bot. 4 (1912) 1502.

Luzon (Benguet, Tayabas, Bataan, Laguna), Sibuyan, *Merrill 1056*, *F. B. 18348 Alvarez, Whitford 296, 1154, 1309, Elmer 12225, 17586*; doubtfully distinct from *C. calophyllum* Perk. In forests at low and medium altitudes. Endemic.

Local names: Chamusil (Ig.); kihu (Ig.); malapilauai (Tag.); milipili (Tag., Bis.); pagsahingín (Tag.).

CANARIUM LUZONICUM (Blume) A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 374; Miq. Fl. Ind. Bat. 1² (1858-59) 651; Engl. in DC. Monog. Phan. 4 (1883) 150; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 30, 29 (1905) 53, Philip. Journ. Sci. 1 (1906) 71, 3 (1908) Bot. 80, Sp. Blancoanae (1918) 207.

Pimela luzonica Blume Mus. Bot. Lugd.-Bat. 1 (1850) 220.

Canarium album Blanco Fl. Filip. (1837) 793, ed. 2 (1845) 546, ed. 3, 3 (1879) 201, non Raeusch.

Canarium commune F.-Vill. Novis. App. (1880) 40; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 27, non Linn.

Canarium carapifolium Perk. Frag. Fl. Philip. (1904) 91.

Canarium polyanthum Perk. op. cit. 95.

Canarium triandrum Engl. DC. Monog. Phan. 4 (1883) 145.

Northern Luzon (Cagayan) to Mindoro, Ticao, and Masbate. In primary forests at low and medium altitudes; common. Endemic.

Local names: Alángi (Ilk.); alánki (Ilk.); antáng (Ibn.); anténg (Ilk.); bakán (Ting.); bakóog (Ilk.); belis (Tag.); bulau (Pang.); malapili (Bik.); pilauai (Tag.); pili (Tag., Bik., S. L. Bis., P. Bis., Ibn.); pisa (Tag.); sahing (Tag.); tugtúgin (Tag.).

CANARIUM MELIOIDES Elm. Leaf. Philip. Bot. 3 (1911) 1079.

Mindanao (Danao), *Elmer 11007*. In forests, altitude about 450 m. Endemic.

Local name: Biauan (Bag.).

CANARIUM MICROPHYLLUM Merr. in Philip. Journ. Sci. 13 (1918) Bot. 304.

Catanduanes, *B. S. 30351 Ramos*. In forests at low altitudes. Endemic.

CANARIUM MINUTIFLORUM Engl. in DC. Monog. Phan. 4 (1883) 123; Vidal Phan. Cuming. Philip. (1885) 101, Rev. Pl. Vasc. Filip. (1886) 80.

Luzon (Pangasinan), *Cuming 1006*; not satisfactorily distinguishable from *C. villosum* F.-Vill. Endemic.

CANARIUM MULTIPINNATUM Llanos Frag. Pl. Filip. (1851) 107, et in Blanco Fl. Filip. ed. 3, 4¹ (1880) 87; Merr. Sp. Blancoanae (1918) 207; F.-Vill. Novis. App. (1880) 40.

Canarium radlkoferi Perk. Frag. Fl. Philip. (1904) 96; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 71.

Canarium bersamifolium Perk. op. cit. 90.

Luzon (Ilocos Sur to Tayabas), Mindoro, Palawan, Negros, Samar, Basilan. In primary forests at low and medium altitudes; locally common. Endemic.

Local names: Aduas (Tag.); bugo (P. Bis.); dulit (Tag.); hagushus (Bik.); ibeng (Klg.); kal-lág (Ibn.); katong-matsíng (Tag.); kiñao-tao (Neg.); kiñao-aeta (Tag.); kuyag (Tag.); mala-apayos (Pang.); pala-táñgan (Ilk.); salong (Bis.).

CANARIUM NERVOSUM Elm. Leaf. Philip. Bot. 2 (1908) 482, 7 (1915) 2566.

Leyte, Negros, Mindanao, Basilan, *Elmer* 7242, 12015, 10817, 11069 as *C. longiflorescens* Elm., *Wenzel* 761, 1555, *F. B.* 22824 *Ponce*, 24527 *Miras & Ponce*. In forests at low and medium altitudes; allied to *Canarium multipinnatum* Llanos. Endemic.

Local names: Bakayan (P. Bis.); ibu (Mbo.); paluahan (C. Bis.).

CANARIUM NITENS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 24.

Mindanao (Zamboanga), *F. B.* 13772 *Foxworthy*, *De Mesa*, & *Villamil*. In forests near sea level. Endemic.

Local name: Baúli (Sul.).

CANARIUM OGAT Elm. Leaf. Philip. Bot. 3 (1911) 1086.

Mindanao (Davao), *Elmer* 11859. In open grasslands and secondary forests, altitude about 1,000 m. In the *Canarium villosum* group, not allied to *C. nervosum* Elm. Endemic.

Local name: Ogát (Bag.).

CANARIUM OLIGANTHUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 23.

Masbate, *Merrill* 2618. In forests at low altitudes. Endemic.

Local name: Pili (P. Bis.).

CANARIUM OVATUM Engl. in DC. Monog. Phan. 4 (1883) 110; *Vidal* Phan. Cuming. Philip. (1885) 101, *Rev. Pl. Vasc. Filip.* (1886) 79; *C. B. Rob.* in Philip. Journ. Sci. 6 (1911) Bot. 206.

Canarium pachyphyllum Perk. Frag. Fl. Philip. (1904) 94.

Luzon (Tayabas, Laguna, Camarines, Albay, Sorsogon), Polillo, Samar, Leyte, Mindanao (Surigao). In primary forests at low and medium altitudes; also cultivated in abacá plantations. The source of the pili nut of commerce. Endemic.

Local names: Basiad (Tag.); liputi (Tag.); pilauí (Tag.); píli (Tag., Bik., S. L. Bis., C. Bis.); pili-pilauai (Tag.).

CANARIUM PALAWANENSE Elm. Leaf. Philip. Bot. 5 (1913) 1754.

Palawan, *Elmer* 12889. In primary forests, altitude about 225 m; allied to *Canarium racemosum* Merr. Endemic.

CANARIUM PAUCINERVIUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 364.

Leyte, Samar, Mindanao (Surigao), *Wenzel* 825, 1517, 1671, 1884, *B. S.* 24496 *Ramos*. In primary forests at low and medium altitudes. Endemic.

Local names: Malapiliai (S. L. Bis.); milipiliai (S. L. Bis.).

CANARIUM PERKINSIAE Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 27; *C. B. Rob.* in Philip. Journ. Sci. 6 (1911) Bot. 206.

Canarium ovatum Perk. Frag. Fl. Philip. (1904) 94, non Engl.

Canarium purpureum Elm. Leaf. Philip. Bot. 4 (1912) 1503.

Canarium todayense Elm. op. cit. 3 (1911) 1087.

Luzon (Nueva Vizcaya, Laguna), Mindoro, Sibuyan, Panay, Samar, Mindanao (Lanao, Davao). In primary forests at low and medium altitudes. Endemic.

Local names: Analian (C. Bis.); buntirau (P. Bis.); ogát (Bag.); magosayong (P. Bis.).

CANARIUM POLYNEURUM Perk. Frag. Fl. Philip. (1904) 96.

Palawan, Merrill 723, Elmer 12658, B. S. 736, 764, 910 Foxworthy, F. B. 3604, 3605 Curran. In forests at low altitudes; scarcely distinguishable from *C. villosum* F.-Vill. Endemic.

Local names: Saleng (Tagb.); salong (Tagb.).

CANARIUM RACEMOSUM Merr. in Philip. Journ. Sci. 3 (1908) Bot. 141; Elm. Leaf. Philip. Bot. 3 (1911) 1077.

Negros, Mindanao (Lanao, Davao), Clemens 1231, F. B. 5541 Everett, Elmer 10763. In forests at medium altitudes. Endemic.

Local names: Salong (P. Bis.); somagasa (Bag.).

CANARIUM RAMOSII Merr. in Philip. Journ. Sci. 8 (1913) Bot. 374.

Leyte, Merrill Phil. Pl. 1168, Wenzel 468.

Var. PARVUM Merr. op. cit. 375.

Leyte, Wenzel 103. In forests at low altitudes; to be compared with *C. paucinervium* Merr. Endemic.

CANARIUM RETICULATUM Merr. in Philip. Journ. Sci. 3 (1908) Bot. 141.

Canarium subvelutinum Elm. Leaf. Philip. Bot. 7 (1915) 2566.

Mindanao (Butuan, Bukidnon, Agusan, Misamis, Lanao, Davao, Zamboanga), Clemens 1150, F. B. 26540 Rola, 11884, 1799 Miranda, 26602 Ceballos, B. S. 15669 Félix, Merrill 7321, 38458 Ramos & Edaña. In primary forests at low and medium altitudes. Endemic.

Local names: Dañganarai (Sub.); gagnan (Buk.); gapog (Sub.); gotkuton (Mbo.); malolugna (Buk.); sagasa (Buk.).

CANARIUM ROBUSTUM Merr. in Philip. Journ. Sci. 11 (1916) Bot. 184.

Samar, Mindanao (Lanao) B. S. 24512, 24450 Ramos, F. B. 12833 Rosenbluth, 25177 Alvarez. In primary forests at low altitudes. Endemic.

Local names: Búang-amú (Lan.); malapiliai (S. L. Bis.).

CANARIUM SAMARENSE Merr. in Philip. Journ. Sci. 11 (1916) Bot. 183.

Samar, B. S. 24191, 24214, 24149 Ramos. In primary forests at low altitudes. Endemic.

Local name: Pañganhauon (S. L. Bis.).

CANARIUM SANCHEZII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 27.

Mindanao (Bukidnon), Sanchez. In forests at low altitudes. Endemic.

Local name: Sauaṅgan (Buk.).

CANARIUM SIBULANENSE Elm. Leaf. Philip. Bot. 3 (1911) 1085.

Mindanao (Davao), Elmer 11206. In forests, altitude about 475 m. Endemic.

Local name: Biauan (Bag.).

CANARIUM STENOPHYLLUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 25.

Luzon (Camarines, Sorsogon), *Merrill Phil. Pl. 1550, Elmer 14644 (C. falcatum Merr.), F. B. 14272 Aguilar.* In forests at low altitudes. Endemic.

CANARIUM TONCALINGII Elm. Leaf. Philip. Bot. 3 (1911) 1082.

Mindanao (Davao), *Elmer 10996.* In forests, altitude about 450 m. Endemic.

Local name: Magasurud (Bag.).

CANARIUM UNIFOLIOLATUM Merr. in Philip. Journ. Sci. 17 (1920) 267.

Mindanao (Surigao), *B. S. 34720 Ramos & Pascasio.* In forests along streams at low altitudes. Endemic.

CANARIUM URDANETENSE Elm. Leaf. Philip. Bot. 7 (1915) 2568.

Mindanao (Agusan), *Elmer 14074.* In forests, altitude about 1,675 m; allied to *Canarium calophyllum* Perk. Endemic.

Local name: Sagasag (Mbo.).

CANARIUM VILLOSUM (Blume) F.-Vill. Novis. App. (1880) 40; Vidal Sinopsis Atlas (1883) 19, t. 28, f. A; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 30, 35 (1906) 27, Philip. Journ. Sci. 1 (1906) Suppl. 71, Fl. Manila (1912) 273, Sp. Blancoanae (1918) 207.

Pimela villosa Blume Mus. Bot. Lugd.-Bat. 1 (1850) 223.

Canariopsis villosa Miq. Fl. Ind. Bat. 1² (1858-59) 652; Engl. in DC.

Monog. Phan. 4 (1883) 151; Vidal Cat. Pl. Prov. Manila (1880) 22.

Canarium commune Blanco Fl. Filip. (1837) 791, non Linn.

Canarium pimela Blanco op. cit. ed. 2 (1845) 545, ed. 3, 3 (1879) 201, t. 343, non Koenig.

Canarium cumingii Engl. in DC. Monog. Phan. 4 (1883) 132; Vidal

Phan. Cuming. Philip. (1885) 101, Rev. Pl. Vasc. Filip. (1886) 79;

Perk. Frag. Fl. Philip. (1904) 93; Merr. in Philip. Bureau Forestry

Bull. 1 (1903) 27; Elm. Leaf. Philip. Bot. 3 (1911) 1077.

Canarium luxurians Engl. in DC. Monog. Phan. 4 (1883) 146 (incl. f. *monstrosa* Engl.); Vidal Phan. Cuming. Philip. (1885) 101, Rev.

Pl. Vasc. Filip. (1886) 80; Perk. Frag. Fl. Philip. (1904) 94.

Canarium thyrsoides Perk. Frag. Fl. Philip. (1904) 98.

Canarium stachyanthum Perk. op. cit. 97.

Canarium juglandifolium Perk. op. cit. 93.

Northern Luzon to Palawan and Mindanao. Common in thickets and secondary forests at low and medium altitudes, and considering its abundance (more than 150 specimens available), rather constant in its characters. Endemic.

Local names: Alagatli (Tag.); anagatli (Tag.); anan̄ggi (Tag.); an-táng (Ibn., Neg.); antél (Ilk.); anténg (Ilk.); anun̄ggi (Tag.); bakayan (Bis.); bua (C. Bis.); bulo (Pamp.); dolit (Ilk.); dulit (Sbl.); giret (Neg.); koribo (Neg.) lonai (C. Bis.); magsagiod (C. Bis.); milipili (P. Bis.); pacharín̄gen (Tag.); pachain̄gen (Tag.); pagsain̄gan (Tag.); pagsain̄gin (Tag.); paksahín̄gin (Tag.); paksain̄gin (Tag.); palasahín̄gen

(Tag.); palsahíngin (Tag.); palsaíngin (Sbl.); panhínhin (Tag.); patsai-
ngin (Tag.); pisa (Ting.); sáhing (Tag.); sáleng (P. Bis.); salngán (C.
Bis.); sáling (Tagb.); sálong (P. Bis., C. Bis.); salosadugan (C. Bis.);
sanai (Bis.); saong-saong (C. Bis.); sulusalúngan (Bis.); tabul (Ig.).

CANARIUM WARBURGIANUM Perk. Frag. Fl. Philip. (1904) 99.

Luzon (Cagayan, Isabela, Apayao), *Warburg 11795, F. B. 17911 Bernardo, 17899 Barros, B. S. 28197 Fénix*. In forests at low altitudes; similar to *C. multipinnatum* Llanos, but the fruits terete, not 3-angled. Endemic.

Local names: Kalág (Ap.); ibéng (Ibn.).

CANARIUM WENZELII Merr. in Philip. Journ. Sci. 9 (1914) Bot 363.

Leyte, *Wenzel 351, 392, Elmer 7274* as *C. leytense* Elm. In forests at low altitudes. Endemic.

CANARIUM WILLIAMSII C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 185.

Canarium villosiflorum Elm. Leaf. Philip. Bot. 7 (1915) 2569.

Mindanao (Agusan, Butuan, Lanao, Zamboanga), *Williams 2111, Elmer 13644, 13347, F. B. 20508 Rafael & Ponce, 28843 Mallonga, B. S. 36680 Ramos & Edaño*. In primary forests at low altitudes. Endemic.

Local names: Gisau (Sul.); gapog (Sub.); sagasa (Mbo.); sagasak (Mbo.).

EXCLUDED SPECIES

CANARIUM ALTISSIMUM Blume; F.-Vill. Novis. App. (1880) 40.

CANARIUM MERRILLII Perk. Frag. Fl. Philip. (1904) 98, in nota, *nomen nudum*.

CANARIUM RUBIGINOSUM Benn.; F.-Vill. Novis. App. (1880) 40.

CANARIUM ZEPHYRINUM Rumph.; F.-Vill. l. c.

3. **SANTIRIA** Blume

SANTIRIA CAUDATA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 30.

Luzon (Camarines), *F. B. 21211, 21217 Alvarez*. In forests at low altitudes. Endemic.

SANTIRIA ELLIPTIFOLIA Merr. in Philip. Journ. Sci. 13 (1918) Bot 305.

Luzon (Camarines), *F. B. 27097 Alambra*. In forests at low altitudes. Endemic.

SANTIRIA GLABRA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 143.

Leyte, Mindanao (Lanao), *Clemens 994, Wenzel 772*. In forests, altitude 500 to 800 m. Endemic.

SANTIRIA LAGUNENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 31.

Luzon (Laguna), *B. S. 20505, 15098, 21987 Ramos, F. B. 7872, 7920 Curran & Merritt*. In forests at low and medium altitudes, ascending on Mt. Banahao to 900 m. Endemic.

SANTIRIA NITIDA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 29, Philip. Journ. Sci. 1 (1906) Suppl. 71.

Luzon (Zambales, Bataan, Laguna), Mindoro, Sibuyan, Panay, Negros. In primary forests at low and medium altitudes. Endemic.

Local names: Alúpag-matsing (Tag.); kamingi (Tag.); korig (Tag.); kurig (Tag.); kuragal (Sbl.); mayagyat (Tag.); sáyong (P. Bis.).

SANTIRIA SAMARENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 31.

Canarium caudatifolium Merr. op. cit. 315.

Canarium crassifolium Merr. op. cit. 274.

Luzon (Camarines), Palawan, Leyte, Samar, Mindanao (Lanao, Agusan, Bukidnon, Surigao), Merrill Phil. Pl. 1641 (as *Canarium*), Wenzel 1090, F. B. 21098 Abellanos, 21136 Miranda, 21670 Sherfesece, Cenabre, & Ponce, 22827 Ponce, 15455 Pray, Elmer 13354 as *Canarium polyanthum*, 13071 as *S. palawanensis* Elm., B. S. 33804 Ramos & Edaña, 15784 Fénix. In damp forests at low and medium altitudes. Borneo.

Local names: Lunai (Lan.); palaspas (Bik.); pili-hanai (C. Bis.).

EXCLUDED SPECIES

SANTIRIA LAEVIGATA Blume; F.-Vill. Novis. App. (1880) 40.

SANTIRIA MAINGAYI Benn.; F.-Vill. l. c.

4. GARUGA Roxburgh

GARUGA ABILO (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 35 (1905)

73, Philip. Journ. Sci. 2 (1907) Bot. 432, Sp. Blancoanae (1918) 208.

Guaiacum abilo Blanco Fl. Filip. (1837) 364.

Icica abilo Blanco op. cit. ed. 2 (1845) 256, ed. 3, 2 (1878) 113.

Garuga mollis Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 475; Engl.

in DC. Monog. Phan. 4 (1883) 6; Rolfe in Journ. Bot. 23 (1885)

211; Vidal Phan. Cuming. Philip. (1885) 101; Perk. Frag. Fl.

Philip. (1904) 100.

Northern Luzon to Mindanao. In thickets and secondary forests at low and medium altitudes. Celebes.

Local names: Abilo (Tag.); bagulibas (Tag.); barus (Ibn.); bió (Ilk.); bitaurang (Bag.); biú (Ilk.); bogo (P. Bis., C. Bis., Mag.); bugo (P. Bis., C. Bis., Chab.); búgu (Ibn.); burús (Ilk.); dulit (Pang.); gabílo (Tag.) malabolo (Bik.); taliñgan (Sul.).

GARUGA CLARKII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 29.

Masbate, Cebu, F. B. 1700 Clark, B. S. 11112 Ramos. In thickets and secondary forests at low altitudes; very close to *G. littoralis* Merr. Endemic.

Local name: Bugo (P. Bis.).

GARUGA LITTORALIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 27.

Garuga floribunda F.-Vill. Novis. App. (1880) 40; Vidal Sinopsis

Atlas (1883) 19, t. 28, f. B, Rev. Pl. Vasc. Filip. (1886) 79, non

Decne.

Luzon (Batangas), Mindoro, Palawan, Balabac, Masbate, Negros, Cebu, Mindanao. Along the seashore and on hills near the sea. Endemic.

Var. **PAUCIJUGA** Merr. op. cit.

Cagayan Sulu, *Merrill 5301*. Along the seashore. Endemic.

Local names: Abílo (Tag.); baro (Sul.); bogo (Kuy., P. Bis., C. Bis.); bugo (P. Bis.); bulu (Sul.); ligason (Tag.); tumberila (Tagb.).

EXCLUDED SPECIES

GARUGA PINNATA Roxb.; F.-Vill. Novis. App. (1880) 40.

EXCLUDED GENERA

AMYRIS ? **MARITIMA** Jacq.; Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 103.

BOSWELLIA sp.; F.-Vill. Novis. App. (1880) 40.

BURSERA JAVANICA F.-Vill. op. cit. 41.

MELIACEAE

1. **TOONA** Roemer

TOONA CALANTAS Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 105, Sp. Blancoanae (1918) 208.

Cedrela odorata Blanco Fl. Filip. (1837) 184, ed. 2 (1845) 130, ed. 3, 1 (1877) 233, non Linn.

Cedrelo toona F.-Vill. Novis. App. (1880) 45; Vidal Sinopsis Atlas (1883) 20, t. 29, f. G., non Roxb.

Toona ciliata Merr. in Philip. Bureau Forestry Bull. 1 (1903) 27, non Roem.

Cedrela febrifuga C. DC. in Rec. Bot. Surv. India 3 (1908) 372, quoad Philip. non Blume.

Batan Islands, Luzon (Cagayan to Sorsogon), Mindoro, Samar, Negros, Leyte, Cebu, Mindanao. In primary forests at low and medium altitudes. Endemic, but very closely allied to the Malayan *Toona sureni* (Blume) Merr. (*T. febrifuga* Roem.).

Local names: Añipla (Iv.); daniggá (Ibn.); danuprá (Ilk.); kalantás (Pang., Sbl., Tag.); kantínġen (Ilk., Sbl.); lanigdá' (Bik.); lanigpá' (Bik.); lanipgá' (Bik., S. L. Bis., C. Bis.); porak (Ilk.).

TOONA PAUCIJUGA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 279.

Leyte, *F. B. 12618 Rosenbluth*. In thickets at low altitudes, endemic, but scarcely more than a variety of the preceding species.

TOONA SURENI (Blume) Merr. Interpret. Herb. Amb. (1917) 305.

Swietenia sureni Blume Cat. Gew. Buitenz. (1823) 72.

Cedrela febrifuga Blume Bijdr. (1825) 180; C. DC. Monog. Phan. 1 (1878) 744.

Surenus febrifuga O. Kuntze Rev. Gen. Pl. 1 (1891) 111.

Toona febrifuga M. Roem. Syn. 1 (1846) 139.

Luzon (Ilocos Norte, Ilocos Sur, Zambales), Mindoro, *F. B. 13256, 23853 Paraiso, 5881 Curran, 9721, 8669 Merritt*. In forests at low altitudes. India to Indo-China, Malay Peninsula, Sumatra, Java.

Local names: Danúpra (Ilk.); kalantás (Tag.).

DOUBTFUL AND EXCLUDED SPECIES

CEDRELA GLABRA C. DC.; F.-Vill. Novis. App. (1880) 45.

CEDRELA TARATARA Blanco Fl. Filip. ed. 2 (1845) 131, ed. 3, 1 (1877) 234; F.-Vill. Novis. App. (1880) 45; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 31, Sp. Blancoanae (1918) 213.

The status of this species is undeterminable. It was apparently based on wood specimens of *Pterocarpus* and leaf specimens of some meliaceous plant, perhaps *Dysoxylum* or *Aglaiia*. The fruits and flowers are not described.

2. *XYLOCARPUS* Koenig

XYLOCARPUS GRANATUM Koenig in Naturf. 20 (1784) 2; Blanco Fl. Filip. (1837) 298, ed. 2 (1845) 207, ed. 3, 2 (1878) 24; Merr. Interpret. Herb. Amb. (1917) 306, Sp. Blancoanae (1918) 208.

Carapa obovata Blume Bijdr. (1825) 179; C. DC. Monog. Phan. 1 (1878) 718.

Xylocarpus obovatus Juss. Mém. Mus. Paris 19 (1830) 244; Perk. Frag. Fl. Philip. (1904) 30, Merr. in Philip. Bureau Forestry Bull. 1 (1903) 28.

Northern Luzon (Cagayan) to Palawan and Mindanao. In mangrove swamps bordering tidal streams, throughout the Archipelago, the bark thin and smooth. India and Ceylon through Malaya to New Caledonia.

Local names: Bigi (Tagk.); kolimbaning (Ilk.); lubanáyong (Ibn.); nígi (Tagb.); níge (Tag., Bik., Tagb.); mígi (Pamp.); piadak (Tagb.); piágau (Tag., P. Bis., Sul.); pulit (Yak.); tabígi (Tag., Bik., Tagb., P. Bis., S. L. Bis., C. Bis., Lan., Sul., Mag.); tibígi (Tag., Bik.); tambo-tambo (Sub., Mag., Sul.); tambu-tambu (Mag.).

XYLOCARPUS MOLUCCENSIS (Lam.) M. Roem. Syn. Hesper. (1846) 124; Merr. Interpret. Herb. Amb. (1917) 307.

Carapa moluccensis Lam. Encycl. 1 (1785) 621, quoad descr. excl. Rumph. t. 61; DC. Prodr. 1 (1824) 626; C. DC. Monog. Phan. 1 (1878) 719, excl. syn. Koen. et Willd. F.-Vill. Novis. App. (1880) 44; Vidal Sinopsis Atlas (1883) 20, t. 29, f. F, Rev. Pl. Vasc. Filip. (1886) 84.

Carapa rumphii Kostel. Allg. Med.- Pharm. Fl. 5 (1836) 1988.

Luzon (Tayabas, Bataan) to Palawan, Mindanao, and the Sulu Archipelago. Along open beaches, not in the mangrove; trees with thick, very rough bark. India to Madagascar, through Malaya to Polynesia.

Local names: Lagutut (P. Bis.); mígi (Pamp.); miki (Pamp.); piadak (Tagb.); piágau (Tag., P. Bis., Sul., Mag.); puyugau (P. Bis.); sangku-yong (Sul.); tabígi (Tag.).

3. *CIPADESSA* Blume

CIPADESSA BACCIFERA (Roth) Miq. Ann. Mus. Bot. Lugd.-Bat. 4 (1868) 6; C. DC. Monog. Phan. 1 (1878) 426.

Melia baccifera Roth Nov. Pl. Sp. (1821) 215.

Elebergia indica Roxb. Hort. Beng. (1814) 33, *nomen nudum*, Fl. Ind. ed. 2, 2 (1832) 392.

Cipadessa fruticosa Blume Bijdr. (1825) 162; Ceron Cat. Pl. Herb. Manila (1892) 42.

Luzon (Bontoc, Benguet, Nueva Vizcaya), Panay, Mindanao (Zamboanga, Davao). In thickets and forests, at low and medium altitudes, ascending to 2,200 m. India to Java.

Local names: Bieum (Ig.); taboat (Bag.); banaibag (Ig.).

CIPADESSA WARBURGII Perk. in Notizbl. Kgl. Bot. Gart. Berlin 3 (1903) 79, Frag. Fl. Philip. (1904) 30.

Luzon (Cagayan), *Warburg 12357* in Herb. Berlin; not certainly distinct from *C. baccifera* Miq.; if distinct, endemic.

4. **TURRAEA** Linnaeus

TURRAEA HUMILIS (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 30, Fl. Manila (1912) 274, Sp. Blancoanae (1918) 208.

Plagianthus humilis Blanco Fl. Filip. (1837) 526, ed. 2 (1845) 367, ed. 3, 2 (1879) 315, t. 181.

Turraea pumila F.-Vill. Novis. App. (1880) 41; Vidal Rev. Pl. Vasc. Filip. (1886) 81, non ? Benn.

Luzon (Batangas, Rizal, Laguna), *Merrill 6232*, Sp. Blancoanae 509, B. S. 14994 *Ramos*. In open ravines and thickets at low altitudes, rare and local. Endemic.

TURRAEA MEMBRANACEA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 306.

Turraea pubescens Rolfe in Journ. Bot. 23 (1885) 211; Vidal Rev. Pl. Vasc. Filip. (1886) 81, non Hellen.

Luzon (Rizal, Pampanga), *Merrill 3913*, F. B. 9619 *Zschokke*, B. S. 977 *Ramos*. On forested slopes, ascending to 700 m; rare and local. Endemic.

TURRAEA PALAWANENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 307.

Palawan, B. S. 15563 *Fénix*. Near the seashore. Endemic.

5. **VAVAEA** Benth

VAVAEA AMICORUM Benth. in Hook. Lond. Journ. Bot. 2 (1843) 212; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 44, t. 16, f. B; Merr. in Philip. Journ. Sci. 13 (1918) Bot. 301.

Luzon (Ilocos Norte, Apayao, Zambales, Nueva Ecija, Cavite, Batangas, Camarines, Sorsogon, incl. *Elmer 16475*, 14941 as *V. sorsogonensis* Elm.), Mindoro, Palawan, *Elmer 12970* as *V. harveyi* Seem., Samar, Panay, Negros, Mindanao, Sulu Archipelago (Sibutu). In forests at low and medium altitudes, locally abundant. Polynesia.

Local names: Miáu (P. Bis.); nanka-nánka (Sul.); namog-pulá (Tagb.); sandána (Sbl., Tag.); sandánan (Sul.); tanankanánka (Sul.).

VAVAEA ARDISIODES Elm. Leaf. Philip. Bot. 8 (1915) 2767; Merr. in Philip. Journ. Sci. 13 (1918) Bot. 301.

Mindanao (Agusan), *Elmer 13974*. On exposed forested ridges and peaks, altitude 1,200 m. Endemic.

Local name: Bagodan (Mbo.).

VAVAEA HETEROPHYLLA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 303.

Luzon (Camarines), *F. B. 27062 Magistrado*. In forests at low altitudes. Endemic.

Local name: Piñgan-piñgan (Tag.).

VAVAEA PACHYPHYLLA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 304.

Luzon (Tayabas, east coast), *B. S. 28816, 28757 Ramos & Edaña*. In the mossy forest, altitude about 1,000 m. Endemic.

VAVAEA PILOSA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 302.

Luzon (Benguet, Nueva Vizcaya, Bulacan, Tayabas, Nueva Ecija, Rizal, Camarines), Masbate, *Merrill 9647, 2652, 2329, Phil. Pl. 1589, F. B. 3391, 3094 Ahern's collector, Lohr 6172*. In forests at low and medium altitudes, ascending to 1,300 m. Endemic.

Local names: Alakai (Tag.); halupait (Bik.); kurokumpol (Neg.); magtalisai (Bik.).

VAVAEA RETUSA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 301.

Negros, *F. B. 23402 Contreras*. On forested slopes, altitude about 200 m. Endemic.

Local name: Sagibunon (P. Bis.).

VAVAEA SURIGAOENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2768; Merr. in Philip. Journ. Sci. 13 (1918) Bot. 301.

Luzon (Tayabas), Samar, Mindanao, *Elmer 13636, 13940, B. S. 19414, 19470, 17482 Ramos, Ahern 405*. In forests, ascending to 1,000 m altitude. Endemic.

Local names: Kondiman (Mbo.); magotamoying (Mbo.); tañgisan (C. Bis.).

6. MELIA Linnaeus

MELIA AZEDARACH Linn. Sp. Pl. (1753) 384; DC. Prodr. 1 (1824) 621; Miq. Fl. Ind. Bat. 1² (1858-59) 533; F.-Vill. Novis. App. (1880) 41; Vidal Sinopsis Atlas (1883) 20, t. 29, f. E, Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 420; Merr. Fl. Manila (1912) 276.

Cultivated in the larger towns for its fragrant flowers, but nowhere naturalized; introduced from China. Universally known by its Spanish name, *paraíso*.

MELIA DUBIA Cav. Diss. 7 (1789) 364; Hiern in Hook. f. Fl. Brit. Ind. 1 (1875) 545; C. DC. Monog. Phan. 1 (1878) 453; F.-Vill. Novis. App. (1880) 41; Vidal Cat. Pl. Prov. Manila (1880) 22.

Melia candollei Juss. in Mém. Mus. Paris 19 (1830) 258; Miq. Fl. Ind. Bat. 1² (1858-59) 532; F.-Vill. Novis. App. (1880) 41; C. DC. Monog. Phan. 1 (1878) 456; Vidal Phan. Cuming. Philip. (1885) 101, Rev. Pl. Vasc. Filip. (1886) 81; Perk. Frag. Fl. Filip. (1904) 30; Merr. Fl. Manila (1912) 276, Sp. Blancoanae (1918) 209.

Melia azedarach Blanco Fl. Filip. (1837) 345, non Linn.

Melia composita Willd. Sp. Pl. 2 (1799) 559; Blanco op. cit. ed. 2 (1845) 241, ed. 3, 2 (1878) 84, t. 420.

Luzon (Ilocos Norte, Tayabas, Bulacan, Bataan, Rizal, Camarines), Mindoro, Negros, Cebu, Siquijor, Bohol, Mindanao. Along the seashore, and in

thickets, second-growth forests, etc., inland, at low and medium altitudes; locally common. I fail to see how *Melia candollei* Juss. can be distinguished from *M. dubia* Cav. India to tropical Africa, southern China and Formosa through Malaya to tropical Australia.

Local names: Bagalñga (C. Bis.); bagaluñgá (Bis.); balagañgo (Tag.); bulilising (Ilk.); gañgo (Tag.); kintana (Tag.); malabuáya (Chab.); malaíba (Tag.); maluñgáiaín (Tag.); mañguliñgau (Lan.); sili-sili (Tag.).

7. AZADIRACHTA A. Jussieu

AZADIRACHTA INTEGRIFOLIOLA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 272.

Palawan, Masbate, Basilan, *Elmer 12638, F. B. 11248 Curran, 5186 Manalo, 25758 Natividad, 22510 Pray, Merrill 2577*. In forests at low altitudes. Endemic.

Local names: Danggo (Tagb.); kalantás (Tagb., P. Bis.); maránggo (Tagb.).

8. SANDORICUM Cavanilles

SANDORICUM KOETJAPE (Burm. f.) Merr. in Philip. Journ. Sci. 7 (1912) Bot. 237, Fl. Manila (1912) 274, Interpret. Herb. Amb. (1917) 308, Sp. Blancoanae (1918) 209.

Melia koetjape Burm. f. Fl. Ind. (1768) 101.

Trichilia nervosa Vahl Symb. 1 (1790) 31.

Sandoricum indicum Cav. Diss. 4 (1787) 359, t. 202, 203; DC. Prodr. 1 (1824) 621; Blanco Fl. Filip. ed. 2 (1845) 242, ed. 3, 2 (1878) 85, t. 127; Miq. Fl. Ind. Bat. 1² (1858-59) 591; C. DC. Monog. Phan. 1 (1878) 461; F.-Vill. Novis. App. (1880) 42; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 82; Perk. Frag. Fl. Philip. (1904) 31; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 71.

Sandoricum ternatum Blanco Fl. Filip. (1837) 346.

Throughout the settled areas of the Philippines, planted and semicultivated, abundant in some second-growth forests. Perhaps an introduced species in the Philippines, but now thoroughly established. Siam and Indo-China throughout the Malayan region, often cultivated.

Local names: Santól, santór (most dialects); katúl (Sbl.).

Burman's type, examined by Dr. Hochreutiner, represents this form. See Ridley, Journ. Bot. 60 (1922) 273, for his views on the application of the specific name.

SANDORICUM VIDALII Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 8.

Sandoricum borneense F.-Vill. Novis. App. (1880) 43; Vidal Cat. Pl. Prov. Manila (1880) 22, non Miq.

Sandoricum harmsianum Perk. Frag. Fl. Philip. (1904) 31, 152.

Luzon (Nueva Vizcaya, Zambales, Nueva Ecija, Tayabas, Bataan, Rizal, Laguna, Camarines, Sorsogon), Mindoro, Palawan, Samar, Negros, Mindanao. In primary forests at low and medium altitudes. Endemic.

Local names: Bago-santól (Tag.); bañgon-santól (Tag.); biot (Gad.); magsantól (Sbl.); malabobonau (S. L. Bis.); malasantól (Tag. Bik.); malapakhi (Tagb.); malarambo (Tag.).

9. DYSOXYLUM Blume

DYSOXYLUM ALTISSIMUM Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 25, Philip. Journ. Sci. 1 (1906) Suppl. 72; C. B. Rob. op. cit. 6 (1911) Bot. 207.

Babuyan Islands, Luzon (Cagayan, Apayao, Tayabas, Bataan, Laguna), Polillo, Palawan, Samar, Panay, *F. B. 11300 Klemme, 26690 Peñas, 624 Borden, B. S. 10233 McGregor, Elmer 13162*. In primary forests at low and medium altitudes. Endemic.

Local names: Guso (Tag.); malatabulian (S. L. Bis.).

DYSOXYLUM ARBORESCENS (Blume) Miq. in Ann. Mus. Bot. Lugd.-Bat. 4 (1868) 24; C. DC. Monog. Phan. 1 (1878) 489.

Goniocheton arborescens Blume Bijdr. (1825) 177.

Dysoxylum rubrum Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 32, Philip. Journ. Sci. 1 (1906) Suppl. 72.

Dysoxylum kunthianum Perk. Frag. Fl. Philip. (1904) 31, non Miq.

Northern Luzon (Cagayan) to Palawan, Mindanao, and Sulu Archipelago. Common in primary forests at low and medium altitudes, ascending to 1,400 m. Malay Peninsula, Andaman Islands, Indo-China, Sumatra, Java, Timor, Celebes, Ceram.

Local names: Abubulí (P. Bis.); baginabot (P. Bis.); bauai-bauai (Tag.); buahan-buáhan (Sul.); darai (Tag.); gogo (C. Bis.); kalimútain (Tag.); katabatába (Bik.); kupel (Neg.); larang (Neg.); malakbalak (Bik.); malasantól (Ig.); mangramáyen (Ibn.); maradaláya' (Ilk.); marasabá (Ibn.); maryalinabo (Lan.); ngarau-na-busag (S. L. Bis.); paria (Tagb.); sasaba (Neg.); tabataba (Bik.).

DYSOXYLUM BIFLORUM Merr. in Philip. Journ. Sci. 5 (1910) Bot. 185.

Luzon (Isabela), *F. B. 18563 Alvarez*. In forests at low altitudes. Endemic.

DYSOXYLUM CAPIZENSE Merr. in Philip. Journ. Sci. 17 (1920) 268.

Mindoro, Panay, *B. S. 35631 Martelino & Edaño, 40959 Ramos*. In primary forests, altitude about 650 m. Endemic.

DYSOXYLUM CUMINGIANUM C. DC. Monog. Phan. 1 (1878) 498; F.-Vill.

Novis. App. (1880) 41; Vidal Phan. Cuming. Philip. (1885) 101, Rev. Pl. Vasc. Filip. (1886) 81; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 72.

Hartigsea cauliflora Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 412, non *Dysoxylum cauliflorum* Hiern.

Dysoxylum cauliflorum Perk. Frag. Fl. Philip. (1904) 31, non Hiern.

Dysoxylum testaceum Elm. Leaf. Philip. Bot. 8 (1919) 3093.

Luzon (Cagayan to Camarines), Mindoro, Tablas, Samar, Panay, Negros, Siargao, Mindanao, incl. *Elmer 10928* as *D. sulphureum* Elm. Rather common in primary forests at low and medium altitudes. Botel Tobago, *Kanchira & Sasaki!* The Malayan *D. cauliflorum* Hiern is closely allied.

Local names: Igai (Mang.); malañgi (Bil.); suha-suha (P. Bis.); tara-tára (Tag.); tarublang (Bik.); timatiñgan (Tag.).

DYSOXYLUM DECANDRUM (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 30, Fl. Manila (1912) 276, Philip. Journ. Sci. 11 (1916) Bot. 279, Sp. Blancoanae (1918) 209.

Turraea decandra Blanco Fl. Filip. (1837) 347.

Turraea virens Blanco op. cit. ed. 2 (1845) 243, ed. 3, 2 (1878) 88, t. 130, non Linn.

Dysoxylum amooroides Miq. Ann. Mus. Bot. Lugd.-Bat. 4 (1868) 16; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 130; Perk. Frag. Fl. Philip. (1904) 31.

Dysoxylum blancoi Vidal Cat. Pl. Prov. Manila (1880) 22, Sinopsis Atlas (1883) 19, t. 29, f. A, Rev. Pl. Vasc. Filip. (1886) 81.

Dysoxylum salutare F.-Vill. Novis. App. (1880) 42, non Blume.

Luzon (Cagayan to Sorsogon), Mindoro, Palawan, Masbate, Leyte, Negros, Mindanao, Basilan. Common in thickets and forests at low altitudes. Java to New Guinea.

Local names: Agáru (Pang.); agúiu (Pamp.); ananangtang (Bik.); bakúgan (Bik.) bundúgon (Bik.); buntóg (Bik.); buntógan (Bik.); bongliu (Bik.); basiloág (Ilk.); bolong-tambag (Bik.); ikuo (Tag.); ígiu, (Tag., Pamp.); kugiug (Tag.); malaadúas (P. Bis.); manangtang (Bik.); malabañgau (Pamp.); makasisi (Bik.); malabaga (Pamp.); palo-hambobokag (Bik.); paluahan (P. Bis.); pamatágin (Ibn.); pasiloág (Ilk.); tadiang-kalabáu (Tag.); tauing-tauing (Mbo.); taliktan (Tag., Pamp.).

DYSOXYLUM EUPHLEBIUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 305, Interpret. Herb. Amb. (1917) 308.

Luzon (Cagayan, Laguna), Negros, Mindanao (Surigao, Lanao), Merrill Phil. Pl. 1404, F. B. 26038 Mabesa, 25442 Santos, B. S. 15102, 10033 Ramos. In forests at low and medium altitudes. Moluccas (Amboina).

Local names: Kalimutain (Tag.); kuling-babui (Tag.); kuling-manók (Tag.); marsédo (Ibn.); palatangin (Ibn.); paluahan (P. Bis.); uahau (P. Bis.).

DYSOXYLUM FLORIBUNDUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 450.

Luzon (Bontoc, Benguet), *Vanoverbergh* 1470, *Merrill* 9677. In forested ravines, altitude 1,300 to 1,500 m. Endemic.

DYSOXYLUM GRANDIFOLIUM Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 23.

Luzon (Tayabas), *Whitford* 632. In forests at low altitudes. Endemic.

DYSOXYLUM HEXANDRUM Merr. in Philip. Journ. Sci. 13 (1918) Bot. 297.

Luzon (Bontoc, Rizal, Sorsogon), Catanduanes, Samar, B. S. 23429, 24392, 30214, 30272 Ramos, 29582, 37904 Ramos & Edaña. In primary forests at low altitudes. Endemic.

Local name: Dalaganan (S. L. Bis.).

DYSOXYLUM ILOCANUM Merr. in Philip. Journ. Sci. 13 (1918) Bot. 298.

Luzon (Ilocos Norte), F. B. 25091 *Paraíso*. On forested slopes, altitude 300 m. Endemic.

Local name: Adukág (Ilk.).

DYSOXYLUM KLEMMER Merr. in Philip. Journ. Sci. 4 (1909) Bot. 273.

Luzon (Cagayan, Camarines), Samar, *F. B.* 13127 Bernardo, 7079 Klemme, 20475 Barros, 25960 Cortes, 21465 Alvarez, *B. S.* 33754 Ramos & Edaño. In primary forests at low altitudes. Endemic.

Local names: Kambolok (Neg.); malaguás (Bik.); patcharagon (S. L. Bis.); tibuñgau (Neg.).

DYSOXYLUM LAXUM Merr. in Philip. Journ. Sci. 7 (1912) Bot. 279.

Camiguin de Misamis, Mindanao (Agusan, Lanao, Davao), *B. S.* 14694 Ramos, *F. B.* 28214 Ramos & Edaño, Elmer 13339, 11084, Clemens. In primary forests at low and medium altitudes. Endemic.

DYSOXYLUM LEYTENSE Merr. in Philip. Journ. Sci. 8 (1913) Bot. 376.

Leyte, Samar, Siargao, Mindanao (Agusan, Surigao), Wenzel 10, 77, *B. S.* 24419, 17460, 15241 Ramos, *F. B.* 12746 Rosenbluth, Elmer 13436. In primary forests at low altitudes. Endemic.

Local names: Bagolan (S. L. Bis.); bagulan (S. L. Bis.); malaságing (Tag.).

DYSOXYLUM LONGIFLORUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 538.

Luzon (Cagayan, Apayao, Sorsogon, Tayabas), *F. B.* 7480, 23618 Ramos, 28196 Félix. In primary forests at low altitudes. Endemic.

Local name: Kabo-kábo (Ibn.).

DYSOXYLUM OCTANDRUM (Blanco) Merr. Sp. Blancoanae (1918) 209.

Turraea octandra Blanco Fl. Filip. (1837) 349, ed. 2 (1845) 244, ed. 3, 2 (1878) 89.

Hartighsea schizochitodes Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 412.

Dysoxylum schizochitode C. DC. Monog. Phan. 1 (1878) 519; F.-Vill. Novis. App. (1880) 42; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 81.

Scyphostigma philippinense M. Roem. Syn. Hesper. (1846) 94.

Luzon (Laguna, Bataan, Camarines Sur), Mindoro, Mindanao, Cuming 1560, Merrill Sp. Blancoanae 856, *F. B.* 20595 Villamil, 19732 Whitford, 11929 Tamesis, Elmer 11707, 11731. In primary forests at low and medium altitudes. Endemic.

Local names: Himamau (Tag.); malaadúas (Bik.); mata-matá (Tag.).

DYSOXYLUM PALAWANENSE Merr. in Philip. Journ. Sci. 9 (1914) Bot. 538.

Palawan, Merrill 2608. In primary forests at low altitudes. Endemic.

DYSOXYLUM PALLIDUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 366.

Luzon (Camarines), Leyte, Wenzel 771, 606, *F. B.* 21722 Peña, Soriano, & Abellanosa. In primary forests at low altitudes. Endemic.

Local name: Kadañgisol (Bik.).

DYSOXYLUM PANAYENSE Merr. in Philip. Journ. Sci. 13 (1918) Bot. 299.

Panay, *F. B.* 23951 Hirro, 31472 Ramos & Edaño. In primary forests up to 400 m altitude. Endemic.

Local name: Balik (P. Bis.).

DYSOXYLUM PAUCIFLORUM Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 32.

Luzon (Rizal, Tayabas), Mindoro, *F. B. 2430, 3109 Ahern's collector, Loher 6825, F. B. 9837, 9727 Merritt*. In primary forests at low and medium altitudes. Endemic.

Local name: Amau (Mang.).

DYSOXYLUM PLATYPHYLLUM Merr. in Philip. Journ. Sci. 8 (1913) Bot. 375.

Luzon (Camarines), Leyte, Samar, Mindanao, *Wenzel 118, 593, F. B. 23883 Cruz, B. S. 33775 Ramos & Edaño, Elmer 11834*. In primary forests at low and medium altitudes. Endemic.

Local name: Takanalon (Buk.).

DYSOXYLUM PYRIFORME Merr. in Philip. Journ. Sci. 3 (1908) Bot. 149.

Luzon (Pangasinan), Mindanao (Lanao, Cotabato), *B. S. 30014 Félix, Clemens 1100, 1221*. In forests, altitude 400 to 800 m. Endemic.

DYSOXYLUM RAMOSII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 539.

Luzon (Laguna), *B. S. 20538, 20512 Ramos*. In primary forests at low altitudes. Endemic.

DYSOXYLUM ROBINSONII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 540.

Luzon (Laguna), Mindanao (Davao), *B. S. 19510 Ramos, 6055, 9870 Robinson, Elmer 9303, 11628 as D. fragrans Elm., 10689 as D. glochidioides Elm.* In primary forests, altitude 600 to 1,000 m. Endemic.

DYSOXYLUM ROSTRATUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 304.

Luzon (Laguna, Rizal), Samar, *Merrill Phil. Pl. 1386, 1473, B. S. 16552, 24296 Ramos, F. B. 23986 Maneja*. In primary forests at low altitudes. Endemic.

DYSOXYLUM SIARGAOENSE Merr. in Philip. Journ. Sci. 17 (1920) 269.

Siargao, *B. S. 35021 Ramos & Pascasio*. In primary forests at low altitudes. Endemic.

DYSOXYLUM TRIANGULARE Merr. in Philip. Journ. Sci. 3 (1908) Bot. 148.

Mindanao (Lanao), *Clemens 981, F. B. 15452 Pray*. In forests, altitude about 800 m. Endemic.

Local name: Bitog (Lan.).

DYSOXYLUM TURCZANINOWII C. DC. Monog. Phan. 1 (1878) 501; [F.-Vill. Novis. App. (1880) 41; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 81.

Hartighsea sp. Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 412.

Luzon (Cagayan, Ilocos Norte, Ilocos Sur, Nueva Vizcaya, Pangasinan, Zambales, Laguna, Batangas, Rizal), Mindoro, Mindanao, *Cuming 1145, B. S. 33176; 33168 Ramos, 29303 Ramos & Edaño, F. B. 10085, 17739 Curran,*

9818 Merritt, 24205 Barros, 9170 Whitford & Hutchinson. In forests at low and medium altitudes. Endemic.

Local names: Agaró (Ilk.); agarú (Pang.); bungloi (P. Bis.); iranin (Sbl.); kayatau (Sul.); lasona (S. L. Bis.); matá-na-úttá (Ibn.); pupuut (Ilk.); adupar (Ibn.).

DYSOXYLUM VENOSUM Merr. in Philip. Journ. Sci. 5 (1910) Bot. 185.

Luzon (Cagayan), Polillo, *F. B. 16839 Curran, 6666 Klemme, B. S. 10770 McGregor*. In primary forests at low altitudes. Endemic.

Local name: Tabokálau (Ibn.).

DYSOXYLUM VERRUCULOSUM Merr. in Philip. Journ. Sci. 8 (1913) Bot. 377.

Leyte, *Wenzel 28*. In forests at low altitudes. Endemic.

DYSOXYLUM WENZELII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 367.

Luzon (Sorsogon), Leyte, Mindanao, *Wenzel 642, 688, 740, Elmer 17211, 15700, B. S. 34696 Ramos & Pascasio*. In primary forests at low and medium altitudes. Endemic.

DOUBTFUL AND EXCLUDED SPECIES

DYSOXYLUM GAUDICHAUDIANUM Miq.; *F.-Vill. Novis. App. (1880) 42*.

Didymochiton gaudichaudianum A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 241.

The Wilkes expedition specimen is sterile, and does not represent Miquel's species; it was referred here with doubt by Gray. See Merrill in Philip. Journ. Sci. 3 (1908) Bot. 79.

DYSOXYLUM sp.?

Boswellia ? integra Blanco Fl. Filip. ed. 2 (1845) 242, ed. 3, 2 (1878) 86; Merr. Sp. Blancoanae (1918) 210.

F.-Villar referred Blanco's species to *Protium javanicum* Burm. f., with which it has nothing in common. Blanco's imperfect description apparently applies to *Dysoxylum*, but even this reduction must be considered as uncertain.

DYSOXYLUM sp.?

Boswellia ? obliqua Blanco Fl. Filip. ed. 2 (1845) 243, ed. 3, 2 (1878) 87; Merr. Sp. Blancoanae (1918) 210.

F.-Villar referred Blanco's species to *Ganophyllum falcatum* Blume, and misled by this reduction I erroneously adopted the binomial *Ganophyllum obliquum* (Blanco) Merr. for Blume's species. However, Blanco's imperfect description certainly does not appertain to *Ganophyllum*, but apparently refers to *Dysoxylum*. Its further identification from the description alone is impossible.

10. CHISOCHETON Blume

CHISOCHETON CAULIFLORUS Merr. in Philip. Journ. Sci. 11 (1916) Bot. 188.

Samar, *B. S. 17625, 24457, 24519 Ramos*. In primary forests at low altitudes. Endemic.

Local name: Malapauhau (S. L. Bis.).

CHISOCHETON CLEMENTIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 145.

Luzon (Cagayan, Apayao, Sorsogon), Samar, Mindanao, incl. *Elmer* 16698 as *C. vulcanicus* Elm. and *Elmer* 13487 as *C. caesifolius* Elm. In forests at low and medium altitudes. Endemic.

CHISOCHETON CUMINGIANUS (C. DC.) Harms in Engl. & Prantl Nat. Pflanzenfam. 3⁴ (1896) 296; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 72.

Dasycoleum cumingianum C. DC. Monog. Phan. 1 (1878) 451; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 84; F.-Vill. Novis. App. (1880) 42.

Luzon (Cagayan to Albay), Catanduanes, Samar, Leyte, Camiguin de Misamis, Mindanao. Common in primary forests at low and medium altitudes. Endemic.

Local names: Balibísan (Mand.); balíta (Buk.); balokanág (Bik.); balukanág (Tag.); batuakan (Ig.); dagau (Mand.); bayóngboi (Gad.); dualat (Tag.); dododo (Bik.); dudos (Bik.); kalimotain (Tag.); kaniknik (S. L. Bis.); kapboñgau (Ap.); kató (Tag.); kogod (Bik.); makalasa (Neg.); malakalád (C. Bis.); maramabólo (Ibn.); pakalsa (Neg.); salakín (Tag.).

CHISOCHETON CURRANII Merr. in Philip. Journ. Sci. 3 (1908) Bot. 234.

Luzon (Benguet), *F. B.* 4865, 4923 *Curran*. In thickets, limestone region, altitude about 1,500 m. Endemic.

CHISOCHETON FULVUS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 146.

Luzon (Apayao), Mindanao, *Clemens* 554, 583, 1046, 1062, *F. B.* 27050 *Jimenez*, 25905 *Alviar*, *B. S.* 28188 *Fénix*, 37000 *Ramos & Edaña*. In forests at medium altitudes. Endemic.

Local names: Kalamatá (Ting.); malasantól (Lan.); sapanauak (Sub.).

CHISOCHETON PARVIFOLIOLUS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 297.

Luzon (Ilocos Sur), *F. B.* 25467 *Paraíso*. In forests, altitude 300 m. Endemic.

CHISOCHETON PENTANDRUS (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 31, Sp. Blancoanae (1918) 210.

Trichilia pentandra Blanco Fl. Filip. (1837) 355, ed. 2 (1845) 249, ed. 3, 2 (1878) 97.

Dasycoleum philippinum Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 415; C. DC. Monog. Phan. 1 (1878) 540; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 84, Sinopsis Atlas (1883) 20, t. 29, f. C.

Chisocheton philippinus Harms in Engl. & Prantl Nat. Pflanzenfam. 3⁴ (1896) 296; Perk. Frag. Fl. Philip. (1904) 32; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 72, 3 (1908) Bot. 412.

Chisocheton ceramicus F.-Vill. Novis. App. (1880) 42, non Miq.

Babuyan Islands, Luzon (Cagayan to Albay), Mindoro, Masbate, Leyte, Samar, Negros, Panay, Mindanao, incl. *Elmer* 14395 as *C. sorsogonensis* Elm. Common in forests at low altitudes. Endemic.

Local names: Agapañga (Tag.); anablog (Mang.); bagolayak (Bik.); balasinan (Tagk.); balor (Tag.); balukanág (Bik.); barónigan (Ibn.); bihuak (Sbl.); dinalat-na-itim (Tag.); galtiano (S. L. Bis.); ginalat-na-itim (Tag.); ibó (C. Bis.); igiu (Tag.); katong-bakuláu (Tag.); katong-matsing (Tag.); kurabdab (Bik.); kurnug (Sul.); lagisan (Sul.); lapirigúbat (Tag.); maguliok (Tag.); malabáhai (Tag.); malágai (Tag.); malaságing (Tag.); malatumbága (Tag.); palatánigan (Ilk.); palatánigen (Ilk.); pamalatánigen (Ilk.); panatang (Tag.); paniaman (Tag.); pau (Tag.); salaki (Tag.); salaking-pulá (Tag.); sansuyud (P. Bis.); saplúnigan (Sul.); tagimúnau (Neg.); totonakálau (Neg.); tutonakálau (Neg.); uidauid (Ilk.).

CHISOCHETON TETRAPETALUS (Turcz.) C. DC. Monog. Phan. 1 (1878) 530; F.-Vill. Novis. App. (1880) 42; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 82; Merr. in Philip. Forestry Bureau Bull. 1 (1903) 28, Philip. Journ. Sci. 1 (1906) Suppl. 72. *Schizochiton tetrapetalus* Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 411.

Luzon (Cagayan to Sorsogon), Mindoro, Palawan, Samar, Leyte, Masbate, Negros, Mindanao, incl. *Elmer 10884* as *C. apoensis* Elm. and *13592* as *C. urduetensis* Elm. Common in forests at low and medium altitudes. Endemic.

Local names: Agogoi (Tag.); andeket (Pang.); balokanág (Bik.); bugoloyak (Bis.); hagupánga (Tag.); ibó (Bis.); kató (Tag.); katong-matsing (Tag.); malabalukók (Ilk.); malapius (Pang.); malayba (Tag.); pantabañgon (Tag.); ulandig (Kuy.).

EXCLUDED SPECIES

CHISOCHETON PANICULATUS Hiern; F.-Vill. Novis. App. (1880) 42.

11. LANSIUM Correa

LANSIUM DUBIUM Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 23.

Luzon (Nueva Ecija, Tayabas, Bulacan, Laguna, Camarines, Sorsogon), Alabat, Ticao, Samar, Masbate, Leyte, Negros, Mindanao, Basilan, *Merrill 10448*, *Phil. Pl. 1502*, *Elmer 15890, 15198*, *B. S. 28593 Ramos & Edaña*, *F. B. 21456 Alvarez*. In primary forests at low and medium altitudes; common locally. Endemic.

Local names: Aráñgan (Bik.); bisik (Sul.); buáhan (Sul.); buláhan (P. Bis.); malakanasi (Bik.); mamatá-babáe (P. Bis.); tulánan (S. L. Bis.); uban-úban (Bik.).

LANSIUM DOMESTICUM Correa in Ann. Mus. Hist. Nat. Paris 10 (1807) 157, *t. 10, f. 1*; Poir. in Lam. Encycl. Suppl. 3 (1813) 299; Jack in Trans. Linn. Soc. 14 (1823) 115, *t. 4*; Blanco Fl. Filip. ed. 2 (1845) 228, ed. 3, 2 (1878) 62, *t. 117*; Miq. Fl. Ind. Bat. 1² (1858-59) 545; F.-Vill. Novis. App. (1880) 43; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 31, Fl. Manila (1912) 275, Sp. Blancoanae (1918) 211.

? *Baccaurea sylvestris* Lour. Fl. Cochinch. (1790) 662, ed. Willd. (1793) 813; Muell.-Arg. in DC. Prodr. 15² (1866) 457.

? *Melia parasitica* Osbeck Dagbok Ostind. Resa (1757) 278; Merr. in Am. Journ. Bot. 3 (1916) 582.

Luzon (Tayabas, Laguna, etc., planted), Mindanao, Basilan, *Merrill 3464, Sp. Blancoanae 53, Elmer 11211, F. B. 24464 Miras & Mariano, 27466 De Mesa, B. S. 15432 Reillo*. Indo-China, Malay Peninsula and Archipelago, in general cultivation for its desirable edible fruit.

Local names: Boboa (Bis.); buahan (Mbo., Sul.); bulahan (Bis.); buan (Mbo.); bukan (Bis.); kaliboñgan (Mbo.); lansónes (Tag., Bik.); tubua (Bag.).

12. REINWARDTIODENDRON Koorders

REINWARDTIODENDRON CELEBICUM Koord. in Meded. Lands Plant. 19 (1898) 389.

Reinwardtiodendron merrillii Perk. Frag. Fl. Philip. (1904) 74; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 72.

Lansium monophyllum Merr. ex Perk. l. c. in syn.

Luzon (Benguet, Ilocos Sur, Nueva Ecija, Bataan, Laguna), Mindoro, Leyte, Camiguin de Misamis, Mindanao. In primary forests at low and medium altitudes, locally abundant. With a cotype of Koorders's genus and species before me, I can see no valid reason for distinguishing the Philippine form from the Celebes one. A monotypic genus, known otherwise from Celebes.

Local names: Balibisan (Mbo.); bianti (Tag.); malakamánga (Tag.).

13. APHANAMIXIS Blume

APHANAMIXIS CORIACEA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 14.

Luzon (Sorsogon), *B. S. 23576 Ramos, Elmer 16054, 15505, 17321*. In primary forests at low and medium altitudes. Endemic.

APHANAMIXIS CUMINGIANA (C. DC.) Harms in Engl. & Prantl Nat. Pflanzenfam. 3⁴ (1896) 296.

Amoora cumingiana C. DC. Monog. Phan. 1 (1878) 580; F.-Vill. Novis. App. (1880) 43; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 83; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 72.

Luzon, Cagayan to Sorsogon, *Loher 5668, Baker 3143, B. S. 28095, 28143 Fénix, 12387, 20169 McGregor, 18304 Otanes, F. B. 6705 Kobbe, 2861 Ahern's collector, 25307 Bawan, Merrill Phil. Pl. 1005*. In forests at low and medium altitudes. Endemic.

Local names: Balukanád (Bik.); balokanág (Tag.); busenlog (Ting.); búngliu (C. Bis.); dugarang (Pamp.); guguloi (Sbl.); malatádiang (Tag.); palatáñgan (Ilk.); pamalatáñgen (Ilk.); palang-batú (Tag.); salakin (Tag.); taliántan (Tag.).

APHANAMIXIS PERROTTETIANA A. Juss. in Mém. Mus. Hist. Nat. Paris 19 (1830) 244, 260, t. 14, f. 9a.

Amoora perrottetiana Walp. Repert. 1 (1842) 429; C. DC. Monog. Phan. 1 (1878) 580; F.-Vill. Novis. App. (1880) 43.

Luzon (Laguna and Bataan to Sorsogon), Mindoro, Palawan, Samar, Leyte, Mindanao, Basilan, *Elmer 18258, F. B. 10745 Curran, B. S. 21981*

Ramos, 21525 *Escritor*, 15912 *Fénix*. In forests at low and medium altitudes. Endemic.

Local names: Balukanág (S. L. Bis.); bohankúya (Yak.); kangko (Bil.); tañgalinau (Lan.); tolagak (Mbo.).

APHANAMIXIS POLILLENSIS (C. B. Rob.) comb. nov.

Amoora polillensis C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 206.

Polillo, Mindanao (Surigao), *B. S.* 6939 *Robinson*, *Ahern* 324. In forests at low altitudes. Endemic.

Local name: Búngliu (C. Bis.).

APHANAMIXIS TRIPETALA (Blanco) Merr. Sp. Blancoanae (1918) 211.

Trichilia tripetala Blanco Fl. Filip. (1837) 354, ed. 2 (1845) 248, ed. 3, 2 (1878) 97.

Amoora cucullata Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 106; ? F.-Vill. Novis. App. (1880) 43, non Roxb.

Amoora rohituka F.-Vill. Novis. App. (1880) 43, non W. & A.

Amoora elmeri Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 23.

Aphanamixis elmeri Merr. in Philip. Journ. Sci. 11 (1916) Bot. 15.

Luzon (Cagayan to Sorsogon), Mindoro, Mindanao. In forests at low and medium altitudes. Endemic.

Local names: Agakak (Bis.); malaságing-putí (Tag.); palatánġan (Ilk.); pamalatánġen (Ilk.); salaging-pulá (Tag.).

14. **AMOORA** Roxburgh

AMOORA AHERNIANA Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 24, Philip. Journ. Sci. 1 (1906) Suppl. 72.

Luzon (Bataan, Zambales, Laguna), *F. B.* 823 *Borden*, 6509 *Aguilar*, 7360 *Curran*, 21828 *Medina*. In primary forests up to 300 m altitude; material from other provinces and islands identified as this does not belong here. Endemic.

Local names: Kató (Tag.); malatumbága (Tag.).

AMOORA CUPULIFERA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 365.

Leyte, *Wenzel* 311, 1042. In primary forests up to 500 m altitude. Endemic.

AMOORA FULVA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 187.

Samar, *B. S.* 24497 *Ramos*. In primary forests at low altitudes. Endemic.

AMOORA MACROCARPA Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 24.

Dysoxylum turczaninowii Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 72, non C. DC.

Luzon (Bataan), *Merrill* 3731, *Whitford* 474, 1199, 1217, *F. B.* 1365 *Borden*, 2634 *Meyer*, *Elmer* 6903, *Williams* 396. In primary forests, altitude 400 to 900 m; erroneously reduced by me to *Dysoxylum turczaninowii* C. DC. Endemic.

EXCLUDED SPECIES

AMOORA CANARANA Hiern; F.-Vill. Novis. App. (1880) 43.

AMOORA GRANDIFOLIA C. DC.; F.-Vill. l. c.

AMOORA RUBIGINOSA Hiern; F.-Vill. l. c.

AMOORA TIMORENSIS F.-Vill. Novis. App. (1880) 43; Vidal Sinopsis Atlas (1883) 20, t. 29, f. D, Rev. Pl. Vasc. Filip. (1886) 83.

Vidal refers here his No. 1020, from Bulacan Province, Luzon, with expressed doubt. I have not seen the specimen, but it probably does not represent Miquel's species, which is an *Aphanamixis*.

15. CLEMENSIA Merrill

CLEMENSIA MACRANTHA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 144.

Mindanao (Bukidnon, Davao, Lanao), Malamaui, Siargao, Basilan, *Clemens* 725, B. S. 14144, 16369 Reillo, 15759 Fénix, 34954 Ramos & Pascasio, 36990 Ramos & Edaño, Elmer 10697, 11082 as *Dysoxylum dehiscens* Elm. In primary forests at low and medium altitudes. A monotypic genus, now known also from Borneo.

Local names: Babañganon (Buk.); bubunao (Sub.).

16. AGLAIA Loureiro

AGLAIA ACUMINATA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 531.

Palawan, Panay, Merrill 9306, B. S. 35369, 35592 Martelino & Edaño. In primary forests at low altitudes. Endemic.

AGLAIA AFFINIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 235.

Balabac, Mindanao (Zamboanga), B. S. 446 Mangubat, F. B. 9160, 9272 Whitford & Hutchinson, Merrill 8199. In forests at low and medium altitudes. Endemic.

AGLAIA AHERNIANA Perk. Frag. Fl. Philip. (1904) 32; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 206.

Luzon (Tayabas, east coast, Camarines, Sorsogon, Albay), Polillo, Sibuyan, Dinagat, Merrill 1025, Ahern 481, F. B. 27092 Fajatin, 10690 Curran, B. S. 9137 Robinson, 10232 McGregor, Elmer 12343, 17292 as *A. irosinensis* Elm. In primary forests at low and medium altitudes. Endemic.

Local name: Manabá (Bik.).

AGLAIA ALTERNIFOLIOLA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 532.

Palawan, Mindanao (Agusan), Basilan, F. B. 18996, 18952 Miranda, 23672 Razon, 25844 Natividad. In forests near the seashore. Endemic.

Local name: Malabuhan (Mbo.).

AGLAIA APOANA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 30.

Mindanao (Davao), Copeland, Elmer 11643, Williams 2637. In forests, altitude 900 to 1,400 m. Endemic.

AGLAIA BADIA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 270.

Luzon (Cagayan), *F. B.* 7082, 11305 *Klemme*, 20450 *Bernardo*. In primary forests at low altitudes. Endemic.

Local names: Masaleng (Neg.); panuhan (Neg.); salotói (Ibn.).

AGLAIA BERNARDOI Merr. in Philip. Journ. Sci. 9 (1914) Bot. 302.

Luzon (Cagayan, Cavite, Rizal), Palawan, *F. B.* 15205 *Bernardo*, 4513 *Curran*, *B. S.* 24113 *Ramos & Deroy*, *Loher* 5866, *Elmer* 13121 as *A. perfulva* Elm. In primary forests at low and medium altitudes. Endemic.

AGLAIA BICOLOR Merr. in Philip. Journ. Sci. 4 (1909) Bot. 270.

Luzon (Cagayan, Ilocos Sur, Pangasinan, Pampanga, Tayabas, Rizal), Leyte, Negros, Mindanao, Basilan, *F. B.* 4288, 4117 *Klemme*, 24315 *Labitag*, 23965 *Maneja*, 23401 *Contreras*, 413 *Ahern's collector*, *Merrill* 1659, *Phil. Pl.* 1337, *B. S.* 15469, 16100 *Reillo*. In primary forests at low and medium altitudes. Endemic.

Local names: Bakaláu (Pang.); basináu (Lan.); batukanág (Ilk.); malaságing (Tag.); mata-na-úttá (Neg.); salamiñgai (S. L. Bis.); salamó-ñgai (Tag.); salapuyud (Ilk.); taratara-babáe (C. Bis.).

AGLAIA BRACHYBOTRYS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 274.

Luzon (Cagayan), Mindanao (Agusan, Davao), *F. B.* 15497 *Bernardo*, *Adduru* 242, 252, *Elmer* 13626a, 11207. In primary forests at low altitudes. Endemic.

Local name: Talisáyan (Ibn.).

AGLAIA BREVIPETIOLATA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 14.

Luzon (Sorsogon), *B. S.* 23522 *Ramos*. In primary forests at low altitudes; very close to *A. luzoniensis* Merr. & Rolfe. Endemic.

AGLAIA CAGAYANENSIS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 275.

Luzon (Cagayan, Isabela), *B. S.* 13801 *Ramos*, 21156 *Escritor*. In forests at low altitudes. Endemic.

AGLAIA CLARKII Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 21.

Luzon (Ilocos Sur, Zambales, Tayabas, Batangas, Camarines, Albay), Palawan, Sibuyan, Masbate, Burias, Tablas, Cebu, *F. B.* 988, 1717 *Clark*, 23601 *Paraíso*, 8368 *Curran & Merritt*, 10590 *Curran*, *B. S.* 22392 *Ramos*, *Merrill* 2028, *Elmer* 12457. In forests at low altitudes. Endemic.

Local names: Alamag (Bik.); balúi (Pang.); batukanág (Ilk.); baro-ñgisan (Tagb.); kansúlod (P. Bis.); kansúyud (Bik.); saldana (C. Bis.); tibkal (Sbl.); tukang-kálaw (Tag., Bik., P. Bis.).

AGLAIA COSTATA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 146.

Luzon (Camarines) Samar, Mindanao (Agusan, Lanao), *Merrill Phil. Pl.* 1576, 1658, *Elmer* 13770 as *A. umbrina* Elm., *Clemens* 568. In forests at low and medium altitudes. Endemic.

Local names: Manabiog (Bik.); paralakát (S. L. Bis.).

AGLAIA CUMINGIANA Turcz. in Bull. Soc. Nat. Mosc. 31² (1858) 409.

Hearnia cumingiana C. DC. Monog. Phan. 1 (1878) 629; F.-Vill. Novis. App. (1880) 44; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 83.

Luzon (Cagayan, Ilocos Norte, Benguet, Nueva Vizcaya, Nueva Ecija, Bulacan, Rizal), Bancalan, Panay, Negros, Mindanao, incl. *Elmer 10956* as *A. subcoriacea* Elm. In primary forests at low and medium altitudes. Endemic.

Local names: Alauñihau (P. Bis.); balbalan-amo (P. Bis.).

AGLAIA CUPREO-LEPIDOTA Merr. in Philip. Journ. Sci. 20 (1922) 393.

Mindoro, *B. S. 39579, 39758* Ramos. In dry primary forests at low altitudes. Endemic.

AGLAIA CURRANII Merr. in Philip. Journ. Sci. 7 (1912) Bot. 276.

Luzon (Bataan), Mindanao (Davao), *F. B. 17580 Curran, 27715 Angeles & Selorio*. In primary forests at low and medium altitudes. Endemic.

AGLAIA DENTICULATA Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 410; C. DC. Monog. Phan. 1 (1878) 612; F.-Vill. Novis. App. (1880) 44; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 83; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 73.

Luzon (Cagayan, Ilocos Norte, Tayabas, Bataan, Laguna, Rizal), Mindoro, Mindanao (Davao, Agusan, incl. *Elmer 13609* as *A. subviridis* Elm.). In primary forests at low and medium altitudes, locally abundant. Endemic.

Local names: Bosilák (Ibn.); dauáng (Ilk.); gasátin (Ilk.); salaking-putí (Tag.); sarálo (Ilk.).

AGLAIA DIFFUSA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 277.

Luzon (Cagayan to Sorsogon), Mindoro, Masbate, Burias, Leyte, Negros, Mindanao, Basilan, incl. *Elmer 13668* as *A. urdanetensis* Elm. and *Elmer 7522* as *A. banahaensis* Elm. Common in forests at low and medium altitudes. Endemic.

Local names: Agulásin (Ibn.); arángen (Ilk.); balambán-nga-puráu (Ilk.); batilan (Sul.); bugalbal (Tag.); kaniui (Tag.); dauéng (Ilk.); kamamatata (Mag.); kuping (Tag.); luñgan (Sul.); malaságing (Tag.); maligang (Sul.); mata-matá (P. Bis.); mamatá (Sub.); oksa (Neg.); palatángan (Ibn.); parusapil (Neg.); salaking-pulá (Tag.); salñgén (Ilk.); saplúgan (Sul.); sarálo (Ilk.); tal-lán (Ibn.); tibungau (Neg.); ugis (Kal.).

AGLAIA DIFFUSIFLORA Merr. in Philip. Journ. Sci. 14 (1919) 410.

Panay, Luzon (Sorsogon), *B. S. 31098* Ramos & Edaño, *Elmer 14934, 16596* as *A. bulusanensis* Elm. In primary forests at low and medium altitudes. Endemic.

AGLAIA ELAEAGNOIDEA (Juss.) Benth. Fl. Austral. 1 (1863) 383; C. DC. Monog. Phan. 1 (1878) 611; Merr. in Philip. Journ. Sci. 13 (1918) Bot. 296.

Nemadra elaeagnoidea A. Juss. in Mém. Mus. Hist. Nat. Paris 19 (1830) 259, t. 14.

Palawan, Bancalan, Balabac, Malamaui, Jolo, Basilan, Mindanao (Zamboanga). In thickets and forests along the seashore. Java to New Caledonia and northeastern Australia.

Local names: Begna (Tagb.); malaságing (Tag.); mata-máta (Sul.).

AGLAIA ELLIPTIFOLIA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 413, 5 (1910) Bot. 355.

Y'Ami, Batan and Babuyan Islands, Luzon (Cagayan, Benguet). In thickets and forests at low altitudes. Formosa (*Kanehira*, as *A. roxburghiana* Miq.).

Local names: Rerei-nu-kurai (Iv.); saybong (Ig.); tuyu-túyu (Ibn.).

AGLAIA EVERETTII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 271.

Negros, Cebu, Leyte, Camiguin de Misamis, Mindanao (Davao, Surigao, Agusan, incl. *Elmer 14028* as *A. agusanensis* Elm.). In primary forests at low and medium altitudes. Endemic.

Local names: Bagasantól (S. L. Bis.); bubúa (P. Bis.); bubúnau (Mbo.); bulóg (P. Bis.); buñguás (C. Bis.); kúnau (Bag.); lumbanáu (C. Bis.); malasantól (C. Bis.).

AGLAIA FORMOSANA Hayata Ic. Pl. Formos. 3 (1913) 52.

Aglaia elaeagnoides Benth. var. *formosana* Hayata ex Matsum. & Hayata in Journ. Coll. Sci. Univ. Tokyo 22 (1906) 78.

Aglaia elaeagnoides Benth var. *pallens* Merr. in Philip. Journ. Sci. 3 (1908) Bot. 413.

Aglaia pallens Merr. in Philip. Journ. Sci. 13 (1918) Bot. 297.

Batan and Babuyan Islands, Luzon (Ilocos Norte), *B. S. 4122, 3331 Fénix, F. B. 19365 Agudo, 26816 Paraíso*. In thickets in ravines and forests at low altitudes. Formosa.

Local name: Alúi (Iv.).

AGLAIA GLOMERATA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 30.

Argophyllum pinnatum Blanco Fl. Filip. (1837) 186, ed. 2 (1845) 131, ed. 3, 1 (1877) 235.

Aglaia palembanica Vidal Sinopsis Atlas (1883) 19, t. 29, f. B, Rev. Pl. Vasc. Filip. (1886) 82; F.-Vill. Novis. App. (1880) 44; Perk. Frag. Fl. Philip. (1904) 34, non Miq.

Aglaia pinnata Merr. Sp. Blancoanae (1918) 212, non Druce (1914).

Luzon (Isabela to Albay), Alabat, Catanduanes, Mindoro, Palawan, Leyte, Panay, Negros, Mindanao, Basilan. Common in primary forests at low and medium altitudes. Endemic, but closely allied to the extra-Philippine *Aglaia palembanica* Miq. and *A. cordata* Hiern.

Local names: Bayánti (Tag.); bulóg (P. Bis.); kaniuing-putí (Tag.); karamiras (Tag.); kuling-manók (Tag.); karayap (Buk.); mata-máta (Sul.); sapluñgan (Sul.); tibuñgao (Klg.).

AGLAIA GRANDIFOLIOLA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 293.

Luzon (Tayabas, Camarines, east coast), *B. S. 26551, 28981, 33900, 33557 Ramos & Edaño*. In primary forests at low altitudes.

AGLAIA HARMSIANA Perk. in Notizbl. Kgl. Bot. Gart. Berlin 3 (1903) 78, Frag. Fl. Philip. (1904) 32; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 73.

Luzon (Cagayan to Sorsogon), Mindoro, Palawan, Catanduanes, Leyte, Panay, Guimaras, Mindanao, Basilan. Common in primary forests at low and medium altitudes. Endemic.

Local names: Balinsiagau (Pang.); batukanág (Ilk.); bubuiakit (Sub.); daiamiras (Tag.); hagásan (S. L. Bis.); kagatóñgan (Tag.); kamata-

máta (Lan.); kaniui (Tag.); lumbunau (Kuy.); malaságing (Tag.); malatumbága (Tag.); mamonak (Sul.); mamonau (Sul.); mata-máta (Bik.); matang-úlang (Tag.); odling (P. Bis.); palatánġan (Ilk.); salamúnġai (Tag.); salapúgud (Ilk.); saplúnġan (Sul.); sulmin (Tag.); tadiáng-kalabau (Tag.); tibúnġau (Neg.).

AGLAIA ILOILO (Blanco) Merr. in Philip. Journ. Sci. 9 (1914) Bot. 533, Sp. Blancoanae (1918) 212.

Melia iloilo Blanco Fl. Filip. ed. 2 (1845) 241, ed. 3, 2 (1878) 85.

Aglaia argentea F.-Vill. Novis. App. (1880) 44; Perk. Frag. Fl. Philip. (1904) 32; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 31, non Blume.

Luzon (Cagayan, Nueva Ecija, Pampanga, Laguna, Sorsogon, *Elmer 17169* as *A. nivea* Elm.), Mindoro, Mindanao (Cotabato). In primary forests at low altitudes. Endemic, unless referable to the Malayan *A. argentea* Blume.

Local name: Iloilo (Pamp.).

Var. AMPLA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 533.

Luzon (Laguna), Mindanao (Lanao), Basilan. In primary forests at low altitudes, ascending to 800 m. Endemic.

AGLAIA LAEVIGATA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 31.

Luzon (Ilocos Norte, Ilocos Sur, Pangasinan, Nueva Ecija, Bulacan, Bataan, Rizal), Mindoro, Negros. In primary forests at low and medium altitudes. Endemic.

Local names: Agai (Tag.); ásat (Ilk.); gisihán (Tag.); salġén (Ilk.); taratara (P. Bis.); tondong (P. Bis.).

AGLAIA LANCEOLATA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 184.

Luzon (Cagayan, Nueva Vizcaya, Rizal), *F. B. 28489, 28541 Cenabre, B. S. 8141 Ramos, Loher 5667, Adduru 82, 191*. In forests at low and medium altitudes. Endemic.

AGLAIA LANCILIMBA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 294.

Luzon (Camarines), *F. B. 26509 De Mesa & Magistrado*. In primary forests at low altitudes. Endemic.

AGLAIA LANGLASSEI C. DC. in Ann. Conserv. Jard. Bot. Genève 10 (1907) 151.

Aglaia lagunensis Merr. in Philip. Journ. Sci. 9 (1914) Bot. 537.

Luzon (Laguna, Tayabas, incl. *Merrill Phil. Pl. 1129* as *A. macrobotrys*, non Turcz.). In primary forests at low and medium altitudes. Endemic.

Local names: Balánti (Tag.); malaságing (Tag.).

AGLAIA LLANOSIANA C. DC. Monog. Phan. 1 (1878) 621; F.-Vill. Novis. App. (1880) 44.

Aglaia turczaninowii C. DC. op. cit. 1 (1878) 623; F.-Vill. Novis. App. (1880) 44; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 83; Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 73.

Nemedra ? sp. Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 410.

Amoora lepidota Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 23.

Babuyan Islands, Luzon (Cagayan to Sorsogon), Alabat, Mindoro, Sibuyan (*Elmer 12466, 12243* as *A. sibuyanensis* Elm.), Palawan, Romblon, Ticao, Guimaras, Panay, Negros, Mindanao, Sibutu. In forests at low and medium altitudes, sometimes along the seashore; common. Endemic.

Local names: Adi-oás (Ilk.); aráñgen (Ilk.); bayánti (Tag.); bulóg (P. Bis.); kaniue (Tag.); libanau (Sul.); magitlúmboi (P. Bis.); malatum-bága (Tag.); mata-máta (Bik., P. Bis.); mata-úttá (Ibn.); salamáñgi (Tag.) taba-tába (Bik.); tagasléng (Ilk.); tapuyi (P. Bis.).

AGLAIA LOHERI Merr. in Philip. Journ. Sci. 9 (1914) Bot. 533.

Luzon (Rizal), *Loher 5682*. In forests. Endemic.

AGLAIA LUZONIENSIS (Vidal) Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 105.

Beddomea luzoniensis Vidal Rev. Pl. Vasc. Filip. (1886) 84; Ceron Cat. Pl. Herb. Manila (1892) 44.

Aglaiia unifoliolata Koord. Meded. Lands Plant. 19 (1898) 635.

Aglaiia monophylla Perk. Frag. Fl. Philip. (1904) 33.

Beddomea simplicifolia F.-Vill. Novis. App. (1880) 43, non Bedd.

Luzon (Cagayan to Sorsogon), southward to Palawan and Mindanao. Common in primary forests at low and medium altitudes. Borneo, Celebes, New Guinea.

Local names: Arupag-nalabága (Ilk.); aparang (C. Bis.); bulóg (P. Bis.); lanzones-gúbat (Tag.); madiabug (Tag.); maragutau (Neg.); mata-máta (Bik.); panapipi (Neg.); patu (Tagb.); sandana (P. Bis.); talán (Ibn.).

Var. **TRIFOLIATA** Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 105.

Mindanao (Zamboanga, Misamis), *F. B. 9117 Whitford & Hutchinson, 4724 Mearns & Hutchinson*. In dipterocarp forests. Endemic.

AGLAIA MACROBOTRYS Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 409; C. DC. Monog. Phan. 1 (1878) 609; F.-Vill. Novis. App. (1880) 44; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 82.

Luzon (Cagayan, Laguna, Camarines, Albay), *Cuming 902, F. B. 5269 Klemme, 24239 Santos, B. S. 15033 Ramos*. In primary forests at low altitudes. Celebes.

Local names: Balánti (Tag.); botgó (Tag.).

AGLAIA MICRANTHA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 22, Philip. Journ. Sci. 1 (1906) Suppl. 73.

Luzon (Bataan), *Whitford 104, 215, 1230, 477, Merrill 3724, Williams 404, F. B. 1195 Borden, 3120 Meyer, 25770 Borromeo*. In primary forests at medium altitudes. Endemic.

Local names: Busilák (Tag.); lansonis-búndok (Tag.).

AGLAIA MIRANDAE Merr. in Philip. Journ. Sci. 13 (1918) Bot. 295.

Basilan, Malamaui, *F. B. 18970 Miranda, 25224 Ceballos & Tecson*. In primary forests at low altitudes. Endemic.

AGLAIA MULTIFLORA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 73.

Luzon (Bataan, Laguna), *F. B. 1420 Ahern's collector, 22707 Gangan, B. S. 21978 Ramos*. In primary forests at low or medium altitudes. Endemic.

Local name: Malatumbága (Tag.).

AGLAIA MULTIFOLIOLA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 534, 11 (1916) Bot. 280.

Leyte, Panay, Negros, Cebu, Mindanao, Basilan, *F. B. 9208 Whitford & Hutchinson, 6458 Everett, 18964 Miranda, Hallier*. In primary forests at low altitudes. Moluccas.

Local names: Bankagnian (Sul.); gupak (C. Bis.); kansúlud (P. Bis.); magsayap (Sul.); pilukau (S. L. Bis.).

AGLAIA MYRIANTHA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 295.

Luzon (Tayabas, east coast), *B. S. 26593 Ramos & Edaño*. In primary forests at low altitudes. Endemic.

Local name: Garororõgon (Neg.).

AGLAIA ODORATA Lour. Fl. Cochinch. (1790) 173; DC. Prodr. 1 (1824) 537; Miq. Fl. Ind. Bat. 1² (1858-59) 543; C. DC. Monog. Phan. 1 (1878) 602; F.-Vill. Novis. App. (1880) 43; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 410; Perk. Frag. Fl. Philip. (1904) 34; Merr. Fl. Manila (1912) 275.

Aglaiia pinnata Druce Bot. Exch. Club (1914) 413, non *Vitex pinnata* Linn.

Introduced from southeastern Asia, cultivated for its fragrant flowers in the larger towns of the Archipelago, but nowhere established. Commonly known as *cinamomo* and as *cinamomo de China* (Sp.).

AGLAIA OLIGANTHA C. DC. Monog. Phan. 1 (1878) 603; F.-Vill. Novis. App. (1880) 44; Vidal Phan. Cuming. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 83.

Aglaiia bordenii Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 22, Philip. Journ. Sci. 1 (1906) Suppl. 72.

Luzon (Cagayan to Sorsogon), Alabat, Leyte, Mindanao (Lanao, Cotabato, Agusan, *Elmer 14116* as *A. anonoides* Elm. fruct. juv.). Common in primary forests at low and medium altitudes. Endemic.

Local names: Ansa (Pang.); malalansónes (Tag.); malaráyap (Tag.); malaságing (Tag.); manggalukbán (Pang.); manalau (Tag.); potían (Tag.).

AGLAIA PALAWANENSIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 235.

Palawan, *B. S. 689 Foxworthy*. In primary forests, altitude about 300 m; not certainly distinct from *A. diffusa* Merr. Endemic.

Local name: Pauasan (Tagb.).

AGLAIA PALLIDA Merr. in Philip. Journ. Sci. 3 (1908) Bot. 147.

Mindanao (Lanao, Davao), *Clemens 1228, Elmer 10735* as *A. reticulata* Elm. In forests, altitude about 700 m. Endemic.

AGLAIA PARVIFOLIA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 21.

Luzon (Taybas), Burias, *F. B. 986 Clark, 15267 Rosenbluth, 22718 Manuel*. On forested slopes at low altitudes; allied to *A. elaeagnoidea* Benth. Endemic.

Local name: Mata-máta (Tag., P. Bis.).

AGLAIA PAUCIFLORA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 31, Philip. Journ. Sci. 1 (1906) Suppl. 73.

Luzon (Bataan, Tayabas, Bulacan, Rizal), Mindanao (Agusan, Davao), *Elmer 6699, 9307, 13986, 10687, F. B. 24738 Leuterio, B. S. 1490 Ramos*. In primary forests at low altitudes; to be compared with *Aglaiia harmsiana* Perk. Endemic.

Local name: Malasaging (Tag.).

AGLAIA PUNCTICULATA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 290.

Luzon (Nueva Ecija), *B. S. 26306 Ramos & Edaño*. In forests, altitude about 400 m. Endemic.

Local name: Amponayan (Neg.).

AGLAIA PYRIFORMIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 290.

Luzon (Tayabas, east coast), *B. S. 26604 Ramos & Edaño*. In primary forests, altitude about 300 m. Endemic.

AGLAIA RIMOSA (Blanco) Merr. Sp. Blancoanae (1918) 212.

Portesia rimosa Blanco Fl. Filip. (1837) 297.

Trichilia rimosa Blanco op. cit. ed. 2 (1845) 250, ed. 3, 2 (1878) 99.

Aglaiia hexandra Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 410;

C. DC. Monog. Phan. 1 (1878) 614; F.-Vill. Novis. App. (1880)

44; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 82.

Aglaiia polystachya Naves ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 106, non Spreng.

Luzon (Cagayan, Pangasinan, Nueva Ecija, Cavite, Laguna, Batangas), Mindoro, *Cuming 1410, 1583, Baker 3671, Elmer 17709, Merrill 2868, Sp. Blancoanae 765, F. B. 24874 Mabesa, 21506 Tamesis, B. S. 24112 Ramos & Deroy*. In primary forests at low and medium altitudes. Endemic.

Local names: Balubar (Pang.); busilák (Tag.); doranai (Neg.); taláng (Ibn.).

AGLAIA RIZALENSIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 289.

Luzon (Rizal), *B. S. 29640 Ramos & Edaño*. In primary forests above an altitude of 800 m; closely allied to *Aglaiia luzoniensis* Merr. & Rolfe. Endemic.

AGLAIA ROBINSONII Merr. in Philip. Journ. Sci. 13 (1918) Bot. 291.

Luzon (Tayabas, east coast), *B. S. 9438 Robinson, 26562, 28634 Ramos & Edaño*. In primary forests, altitude about 900 m. Endemic.

Local name: Maraampinit (Neg.).

AGLAIA SAMARENSIS Merr. in Philip. Journ. Sci. 11 (1916) Bot. 186.

Samar, Luzon (Sorsogon), *B. S. 24197 Ramos, Elmer 16814, 17147*. In forests at low altitudes; very similar to *Aglaiia diffusa* Merr. Endemic.

AGLAIA STELLATO-TOMENTOSA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 535.

Mindanao (Cotabato), Basilan, *F. B. 20085 Miranda, 14917 Tarrosa, Hallier*. In primary forests at low altitudes; apparently very closely allied to *Aglaia hemsleyi* Koord. of Celebes. Endemic.

AGLAIA STENOPHYLLA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 185.

Samar, Mindanao (Agusan), *B. S. 24182 Ramos, F. B. 28984 Mallonga*. In damp forests at low altitudes. Endemic.

AGLAIA TAYABENSIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 292.

Luzon (Tayabas, east coast), *B. S. 23133 Ramos & Edaña*. In primary forests at low altitudes. Endemic.

AGLAIA TRUNCIFLORA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 303.

Leyte, *B. S. 15232 Ramos*. In primary forests at low or medium altitudes. Endemic.

AGLAIA VILLAMILII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 536.

Luzon (Laguna), Mindanao (Zamboanga), *F. B. 21866 Villamil, 26178 Mabesa*. In primary forests at low altitudes. Endemic.

Local name: Sándalo (Chab.).

EXCLUDED SPECIES

AGLAIA ANGUSTIFOLIA Miq.; F.-Vill. Novis. App. (1880) 44.

AGLAIA GRANDIS Miq.; F.-Vill. l. c.

AGLAIA MINUTIFLORA Bedd.; F.-Vill. l. c.

AGLAIA ROXBURGHIANA Bedd.; F.-Vill. l. c.

AGLAIA TENUICAULIS Hiern.; F.-Vill. l. c.

17. WALSURA Roxburgh

WALSURA AHERNIANA Perk. Frag. Fl. Philip. (1904) 34.

Walsura robusta Merr. in Philip. Bureau Forestry Bull. 1 (1903) 29, non Roxb.

Luzon (Cagayan, Isabela, Tayabas, Rizal, Camarines, Sorsogon), Palawan, Samar, Leyte, Negros, Basilan. Locally common in forests at low and medium altitudes. Endemic.

Local names: Baniui (Tag.); bayít (Tag.); bukaláu (Ilk.); kalibáian (Bik.); kuráuit (Ibn.); makan-ugsá (Klg.); malatúba (Bik.); painá' (Tag.); palinghuai (Bik.); panigibuli (P. Bis.); saraksák (Ibn.); urisép (Ilk.).

WALSURA BRACHYBOTRYS Merr. in Philip. Journ. Sci. 8 (1913) Bot. 378.

Leyte, Samar, Mindanao, *Wenzel 295, 1621, B. S. 24140 Ramos, Williams 2093, F. B. 17934 Miranda*. In primary forests at low altitudes. Endemic.

WALSURA MULTIJUGA King in Journ. As. Soc. Beng. 64² (1895) 83; Valetón in Ic. Bogor. 2 (1906) 156, t. 135; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 148.

Palawan, Mindanao (Bukidnon, Lanao), *Clemens, F. B. 27052 Jimenez, 23173 Agama, 23137 Acuña, B. S. 39167 Ramos & Edaño, Elmer 13153 as W. palawanensis* Elm. In forests up to 800 m altitude. Malay Peninsula, Sumatra, Banca.

WALSURA VILLAMILII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 308.

Mindanao (Zamboanga), *F. B. 21888 Villamil, 24159 Miranda, 13764 Foxworthy, De Mesa, & Villamil*. On forested slopes at low altitudes. Endemic.

Local name: Sasá (Sul.).

18. HEYNEA Roxburgh

HEYNEA SUMATRANA Miq. Ann. Mus. Bot. Lugd.-Bat. 4 (1868) 60; C. DC. Monog. Phan. 1 (1878) 714; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 273.

Scutinanthe engleri Elm. Leaf. Philip. Bot. 1 (1908) 298.

Luzon (Tayabas, Camarines), Mindanao (Agusan), Basilan, *Elmer 2179, 14054 (H. engleri Elm.), B. S. 19534 Ramos, 15422, 16304 Reillo, F. B. 25315 Bawan, 6702 Kobbe, 18746 Darling, 18845 Miranda, 24947 Tecson*. In forests at low and medium altitudes. Sumatra, Borneo.

EXCLUDED GENERA

BEDDOMEA INDICA Hook. f.; F.-Vill. Novis. App. (1880) 43.

CHLOROXYLON SWIETENIA DC.; F.-Vill. op. cit. (1883) 349.

TRICHILIA VOLUBILIS Blanco Fl. Filip. ed. 2 (1845) 249, ed. 3, 2 (1878) 98.

The description is in part based on *Derris elliptica* Benth., in part on *Albizia saponaria* Blume, and on the fruit of some undeterminable plant.

MALPIGHIACEAE

1. ASPIDOPTERIS Jussieu

ASPIDOPTERIS ELLIPTICA (Blume) A. Juss. in Ann. Sci. Nat. II 13 (1840) 266, Arch. Mus. Hist. Nat. Paris 3 (1843) 509; Hutch. in Kew Bull. (1917) 99, f. 15.

Hiraca elliptica Blume Bijdr. (1825) 225.

Ryssopteris ovata Turcz. in Bull. Soc. Nat. Mosc. 36¹ (1863) 568.

Aspidopteris ovata Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 106.

Combretum sexalatum Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 212, quoad fruct.

Luzon (Pangasinan, Laguna, Tayabas, Rizal, Sorsogon), Masbate, Biliran, Leyte, Mindanao. In thickets and second-growth forests at low and medium altitudes. Java, Borneo.

Local names: Laplapsot (Ilk.); lampei (Mbo.); mayetbong (Tag.); tauag-amó (Tag.).

2. TRISTELLATEIA Thouars

TRISTELLATEIA AUSTRALASIAE A. Rich. Syst. Astrolab. Atlas (1833) t. 15; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 236, Fl. Manila (1912) 278, Sp. Blancoanae (1918) 213.

Tristellateia australasica auct. plur.; F.-Vill. Novis. App. (1880) 32; Vidal Sinopsis Atlas (1883) 18, t. 22, f. B, Rev. Pl. Vasc. Filip. (1886) 73.

Gaertneria laurifolia Wall. Cat. (1832) No. 7265, *nomen nudum*.

Tristellateia australia A. Rich. Sert. Astrolab. (text) 2 (1834) 38; Sprague in Curtis's Bot. Mag. IV 6 (1910) t. 8334.

Platynema laurifolium W. & A. in Edinb. New Philos. Journ. (Apr.-June, 1833) 179, Prodr. (1834) 107.

Hiraca reclinata Blanco Fl. Filip. (1837) 378, non Jacq.

Tristellateia malintana Blanco op. cit. ed. 2 (1845) 267, ed 3, 2 (1878) 132, t. 435.

Along tidal streams, borders of mangrove swamps, etc., throughout the Philippines. Malay Peninsula and Archipelago to tropical Australia and Caledonia.

Local names: Añgasin (Bik.); bagnit (Tagb.); bagit (Bik., Tag.); bahau (Sul.); bauing (Tag.); binusisi (Tag.); ibud-ibud (Bis.); kaulog-pau (Bag.); magbuaya (C. Bis.); mapinit (Neg.); sigíd (S. L. Bis.).

3. HIPTAGE Gaertner

HIPTAGE CEBUENSIS Elm. Leaf. Philip. Bot. 2 (1910) 683.

Panay, Leyte, Cebu, *Elmer 12029*, *Wenzel 1694*, *1771*, *Merrill Phil. Pl. 1704*, *B. S. 31158 Ramos & Edaño*, *11044 Ramos*, *F. B. 28330*, *28331 Cenabre & Cruz*. In thickets and open forests at low altitudes. Endemic.

HIPTAGE CUMINGII Merr. in Philip. Journ. Sci. 5 (1910) Bot. 190.

Hiptage madablota Vidal Phan. Cuming. Philip. (1885) 99, non Gaertn.

Luzon (Pangasinan, Pampanga, Laguna, Camarines), Mindoro, Palawan, Romblon, *Cuming 971*, *Elmer 12156*, *B. S. 22440 Ramos*, *F. B. 25702 Foxworthy*, *23778 Alvarez*. In thickets and forests at low altitudes. Endemic.

Local names: Kalaripang (P. Bis.); komimpol (P. Bis.).

HIPTAGE CURRANII Merr. in Philip. Journ. Sci. 5 (1910) Bot. 188.

Luzon (Zambales), *F. B. 6951 Curran*, in dry stream bed. Endemic.

HIPTAGE JAVANICA Blume Bijdr. (1825) 224; Miq. Fl. Ind. Bat. 1² (1858) 586; Hochr. Pl. Bogor. Exsic. No. 32.

Mindanao (Cotabato), *F. B. 3914 Hutchinson*. In forests at low altitudes. Java.

Local name: Boloñgog (Mag.).

HIPTAGE LOHERI Merr. Sp. Blancoanae (1918) 213.

Triopteris jamaicensis Blanco Fl. Filip. (1837) 350, ed. 2 (1845) 267, ed. 3, 2 (1878) 133, non Linn.

Hiptage madablota F.-Vill. Novis. App. (1880) 32; Vidal Sinopsis Atlas (1883) 17, t. 22, f. A., Rev. Pl. Vasc. Filip. (1886) 73, non Gaertn.

Luzon (Bulacan, Rizal, Bataan, Batangas, Tayabas), *B. S. 34161 Ramos & Edaño*, *Merrill 1704*, *5046*, *Sp. Blancoanae 824*, *F. B. 420*, *2660 Ahern's collector*, *Loher 5768*, *5786*, *5789*. In thickets and forests at low and medium altitudes. Endemic.

Local names: Komimpol (Bis.); malaskag (Tag.).

HIPTAGE LUZONICA Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 33, Philip. Journ. Sci. 1 (1906) Suppl. 74, 5 (1910) Bot. 191.

Luzon (Bataan), *Whitford 1148*. On exposed ridges, altitude 900 m. Endemic.

HIPTAGE MACROPTERA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 189.

Mindanao (Lanao), *Clemens 1056*. In thickets and forests along the lake shores. Endemic.

HIPTAGE PINNATA Elm. Leaf. Philip. Bot. 5 (1913) 1810.

Palawan, *Elmer 12589*. In thickets and forests at low altitudes. The leaves are simple, not pinnate! The fruits are unknown. Endemic.

Local name: Tagabu (Tagb.).

HIPTAGE PUBESCENS Merr. in Philip. Journ. Sci. 5 (1910) Bot. 187.

Luzon (Abra, Ilocos Norte, Bontoc, Benguet), *B. S. 7257 Ramos, 37946 Ramos & Edaño, F. B. 11263 Klemme, 13979 Merritt & Darling, Loher 178*. In thickets and forests, altitude 1,000 to 1,200 m. Endemic.

Var. LANCEOLATA Merr. l. c.

Luzon (Ilocos Norte, Ilocos Sur), *F. B. 13955, 13943 Merritt & Darling, 25865 Adduru, 5632 Klemme*. In thickets, altitude 100 to 700 m. Endemic.

Local names: Dalúnit (Ilk.); pañgardisen (Ilk.); panunianáyen (Ilk.).

HIPTAGE RETICULATA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 186.

Luzon (Zambales), *Loher 2243*. Endemic.

HIPTAGE TETRAPTERA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 188.

Palawan, *Merrill 1791*. In thickets at low altitudes. Endemic.

4. RYSSOPTERYS Blume

RYSSOPTERYS ALBIDA (Blume) comb. nov.

Heteropterys albida Blume Bijdr. (1825) 226.

Rysopterys microstema A. Juss. in Arch. Mus. Paris 3 (1843) 384; Walp. Repert. 5 (1845) 221; Miq. Fl. Ind. Bat. 1² (1858-59) 583; F.-Vill. Novis. App. (1880) 32; Vidal Phan. Cuming. Philip. (1885) 99.

Bohol, Mindanao, Basilan, *Cuming 1845, Merrill 8177, 8247, B. S. 16345 Reillo*. In thickets at low and medium altitudes. Java and probably other parts of the Malay Archipelago.

RYSSOPTERYS CUMINGIANA A. Juss. in Arch. Mus. Paris 3 (1843) 386; Walp. Repert. 5 (1845) 221; Miq. Fl. Ind. Bat. 1² (1858-59) 584; F.-Vill. Novis. App. (1880) 32; Vidal Phan. Cuming. Philip. (1885) 99.

Rysopterys timoriensis Walp. Repert. 5 (1845) 222, quoad Philip.; F.-Vill. Novis. App. (1880) 32, non Juss.

Luzon (Tayabas), Mindoro, Panay, Masbate, Tablas, Samar, Mindanao, Sulu Archipelago, *Cuming 1489, Merrill 3042, Williams 294bis, Elmer 11055, B. S. 26618, 29136 Ramos & Edaño, 17403 Ramos, 32253, 32230 McGregor*. In thickets and forests at low altitudes. Formosa.

Local names: Bugtung-áhas (Tag.); lagun (Bag.); laumus (Bag.).

RYSSOPTERYS DEALBATA A. Juss. in Arch. Mus. Paris 3 (1843) 386; Walp. Repert. 5 (1845) 221; Miq. Fl. Ind. Bat. 1² (1858-59) 584; F.-Vill. Novis. App. (1880) 32; Vidal Phan. Cuming. Philip. (1885) 99.

Luzon (Bontoc, Union), Panay, Cebu, *Cuming 1775, Lete 251, 376, 360, B. S. 21248 Escritor*. In thickets at low and medium altitudes. Celebes.

5. THRYALLIS Linnaeus

THRYALLIS GLAUCA (Cav.) O. Kuntze Rev. Gen. Pl. (1891) 89; Small in North Am. Flora 25 (1910) 150.

Galphimia glauca Cav. Ic. 5 (1799) 61, *t.* 489, Anal. Hist. Nat. 1 (1799) 37; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 29, Fl. Manila (1912) 277.

Galphimia gracilis Bartl. in Linnaea 13 (1839) 552.

Cultivated in Manila and other large towns for ornamental purposes, but nowhere spontaneous. A native of Mexico and Central America, naturalized in the West Indies.

Local name: Kuisia (Tag.).

POLYGALACEAE

1. POLYGALA Tournefort

POLYGALA CARDIOCARPA Kurz in Journ. As. Soc. Beng. 41² (1872) 293; Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 42; Gagnep. in Lecomte Fl. Gén. Indo-Chine 1 (1909) 253; Merr. in Philip. Journ. Sci. 13 (1918) Bot. 20.

Negros, *Eskridge*. At low altitudes; rare. Burma, Indo-China.

Local name: Chikati (P. Bis.).

POLYGALA CHINENSIS Linn. Sp. Pl. (1753) 704; DC. Prodr. 1 (1824) 331; Rolfe in Journ. Bot. 23 (1885) 210; Vidal Phan. Cuming. Philip. (1885) 95, Rev. Pl. Vasc. Filip. (1886) 51; Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 385, *t.* 29, *f.* 45-46; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 74, Fl. Manila (1912) 278, Sp. Blancoanae (1918) 214; Gagnep. in Lecomte Fl. Gén. Indo-Chine 1 (1909) 258.

Polygala linarifolia Willd. Sp. Pl. 3² (1803) 877; DC. Prodr. 1 (1824) 326; F.-Vill. Novis. App. (1880) 14.

Polygala chinensis Linn. var. *linearifolia* Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 386; Merr. Sp. Blancoanae (1918) 214.

Polygala monspeliaca Blanco Fl. Filip. (1837) 557, ed. 2 (1845) 388, ed. 3, 2 (1879) 350, non Linn.

Polygala tranquebarica Mart. in Denkschr. Bot. Ges. Regensb. 1 (1815) 186; Hassk. in Ann. Mus. Bot. Ludg.-Bat. 1 (1863-64) 158.

Luzon (Bataan, Rizal, Laguna, Cavite), Mindanao, *Cuming* 699, *Williams* 58, 2958, *Merrill* 3092, *Sp. Blancoanae* 473, *B. S.* 1055, 14942 *Ramos*. India to China through Malaya to tropical Australia.

Local name: Kaiutdiuata (Bag.).

POLYGALA ELONGATA Klein in Willd. Sp. Pl. 3² (1803) 879; Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 387, *t.* 29, *f.* 47-48; Merr. in Philip. Journ. Sci. 13 (1918) Bot. 20.

Mindanao (Bukidnon, Cotabato), *B. S.* 26016 *Fénix*, *Copeland*. In open grasslands at low altitudes; rare. India.

POLYGALA GLOMERATA Lour. Fl. Cochinch. (1790) 426; DC. Prodr. 1 (1824) 386; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 201; Gagnep. in Lecomte Fl. Gén. Indo-Chine 1 (1909) 257.

Polygala densiflora Blume Bijdr. (1825) 59; Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 380.

Luzon (Pangasinan), Golo, Mindanao (Lanao), *B. S. 30060 Félix, 28479 Ramos & Edaño, Clemens 36, Merrill 11541*. On open grassy slopes; rare. India to southern China, Malay Peninsula, Sumatra, Borneo, and Java.

Local name: Malamaní (Pang.).

POLYGALA JAPONICA Houtt. Handleid. 10 (1779) 89, *t. 62, f. 1*; DC. Prodr. 1 (1824) 324; Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 353; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 106; Gagnep. in Lecomte Fl. Gén. Indo-Chine 1 (1909) 255.

Polygala luzoniensis Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 202.

Luzon (Bontoc, Benguet, Lepanto), Mindanao (Bukidnon). On open grassy slopes, altitude 700 to 2,400 m. Japan and China, Formosa, Celebes.

POLYGALA LONGIFOLIA Poir. in Lam. Encycl. 5 (1904) 501; Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 358; Merr. in Philip. Journ. Sci. 9 (1914) Bot. 451; Gagnep. in Lecomte Fl. Gén. Indo-Chine 1 (1909) 257.

Polygala leptalea DC. Prodr. 1 (1824) 325.

Luzon (Bontoc, Nueva Vizcaya), Culion, Mindanao, (Cotabato), *Vanoverbergh 1745, B. S. 20135 McGregor, 41331 Ramos, Copeland*. In open grasslands, ascending to 1,300 m; rare. India to Indo-China, Java, and tropical Australia.

POLYGALA PERSICARIAEFOLIA DC. Prodr. 1 (1824) 323, var **WALL-ICHIANA** Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 331; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 106.

Polygala septemnervia Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 202.

Luzon (Lepanto, Bontoc, Benguet, Cavite), *Merrill 4401, 4263, Williams 959, B. S. 1349 Mangubat*. On open grassy slopes, altitude 500 to 1,800 m. India to southern China; Timor; with some forms in tropical Australia.

POLYGALA POLIFOLIA Presl Rel. Haenk. 2 (1830) 101; F.-Vill. Novis. App. (1880) 14.

Polygala warburgii Chodat in Engl. Bot. Jahrb. 13 (1891) 346, Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 315, *t. 27, f. 9*.

Polygala telephioides F.-Vill. Novis. App. (1880) 14; Vidal Phan. Cuming. Philip. (1885) 95, Rev. Pl. Vasc. Filip. (1886) 51. (?) non Willd.

Luzon (Cagayan, Ilocos Norte, Benguet, Bontoc, Lepanto, Tarlac, Rizal), Semirara, Mindanao. In open grasslands at low and medium altitudes; to be critically compared with *P. telephioides* Willd. Marianne Islands, Ambonia, New Guinea.

POLYGALA TRIPHYLLA Ham. in D. Don Prodr. Fl. Nepal. (1825) 200; Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31¹ (1893) 41; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 106.

Luzon (Bontoc, Benguet), Mindanao (Bukidnon). In open grasslands, ascending to 1,300 m; rare. India to southern China and Japan.

POLYGALA VENENOSA Juss. ex Poir. in Lam. Encycl. 5 (1804) 493; DC. Prodr. 1 (1824) 331; Ceron Cat. Pl. Herb. Manila (1892) 18; Chodat in Mém. Soc. Phys. Hist. Nat. Genève 31² (1893) 98; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 277.

Mindoro, Palawan, Leyte, Negros, Camiguin de Misamis, Dinagat, Mindanao, Sulu Archipelago. In damp primary forests at low and medium altitudes, scattered. Malay Peninsula and Archipelago.

Local names: Taram (Bag.); hagnaya (P. Bis.).

EXCLUDED SPECIES

POLYGALA GLAUROIDES Linn.; Willd. Sp. Pl. 3³ (1804) 896 "In Zeylonia inque Philippinis."

The Philippine reference was undoubtedly based on an erroneously identified or localized specimen.

2. SECURIDACA Linnaeus

SECURIDACA ATRO-VIOLACEA Elm. Leafsl. Philip. Bot. 5 (1913) 1671.

Palawan, *Elmer* 12774, 13236 (or 13238). In forests at and above 225 m altitude. Endemic.

SECURIDACA CORYMBOSA Turcz. in Bull. Soc. Nat. Mosc. 27² (1854) 360; F.-Vill. Novis. App. (1880) 14; Vidal Phan. Cuming. Philip. (1885) 95, Rev. Pl. Vasc. Filip. (1886) 51; Merr. Sp. Blancoanae (1918) 214.

Securidaca volubilis Blanco Fl. Filip. (1837) 556, non Linn.

Securidaca complicata Blanco op. cit. ed. 2 (1845) 388, ed. 3, 2 (1879) 349, non HBK.

Securidaca cumingii Hassk. in Ann. Mus. Bot. Lugd.-Bat. 1 (1863) 180.

Securidaca tavoyana F.-Vill. Novis. App. (1880) 14; Vidal Sinopsis Atlas (1883) 13, t. 9, f. A, non Wall.

Luzon (Benguet, Nueva Vizcaya, Pangasinan, Tayabas, Bataan, Rizal, Laguna), Mindoro, Negros. In forests at low and medium altitudes. Endemic.

Local names: Balágon (Pamp.); baut (Ilk.); gogong-bakai (Bik.); gogong-bisáya (Tag.); hinaki (P. Bis.); udok (Ig.); oyañgya (Tag.).

SECURIDACA PHILIPPINENSIS Chodat in Bull. Herb. Boiss. 4 (1896) 233.

Luzon (Sorsogon), Leyte, Panay, Bohol, Mindanao (Lanao), *Cuming* 1852, *Elmer* 17235, *F. B.* 10552 *Curran*, *Wenzel* 840, 940, 1053, *Clemens* 488, *B. S.* 35466 *Ramos & Edaña*. In primary forests at low and medium altitudes. Endemic.

Local names: Balunos (Bik.); salabi (Bag.).

3. SALOMONIA Loureiro

SALOMONIA CANTONIENSIS Lour. Fl. Cochinch. (1790) 14; DC. Prodr. 1 (1824) 334; Benth. Fl. Hongk. (1861) 44; Benn. in Hook. f. Fl. Brit. Ind. 1 (1872) 206; Hassk. in Ann. Mus. Bot. Lugd.-Bat. 1 1863-64) 144.

Luzon (Bontoc), Panay, Mindanao (Lanao), *Vanoverbergh* 3797, *Clemens* 16, *B. S.* 30953 *Ramos*. On open slopes and in thickets at medium altitudes; rare. India to southern China, Malaya, and tropical Australia.

SALOMONIA CILIATA (Linn.) DC. Prodr. 1 (1824) 334; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 237, Fl. Manila (1912) 279, Sp. Blancoanae (1918) 214.

Polygala ciliata Linn. Sp. Pl. (1753) 705; DC. Prodr. 1 (1824) 334.

Salomonina oblongifolia DC. Prodr. 1 (1824) 334; F.-Vill. Novis. App. (1880) 14; Vidal Phan. Cuming. Philip. (1885) 95, Rev. Pl. Vasc. Filip. (1886) 50, Trimen Fl. Ceyl. 1 (1893) 83; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 19.

Amorpha pedalis Blanco Fl. Filip. (1837) 553, ed. 2 (1845) 387, ed. 3, 2 (1879) 348.

Salomonina ramosissima Turcz. in Bull. Soc. Nat. Mosc. 27² (1854) 352; F.-Vill. Novis. App. (1880) 14.

Salomonina horneri Hassk. in Miq. Pl. Jungh. (1852) 123, Ann. Mus. Bot. Lugd.-Bat. 1 (1863-64) 149.

Luzon (Ilocos Sur, Lepanto, Benguet, Bulacan, Rizal), Merrill *Phil. Pl.* 706, 1987, *Sp. Blancoanae* 332, *Cuming* 1118, *B. S.* 10893, 13754 *Ramos*. In open grasslands at low and medium altitudes. India to southern China through Malaya to tropical Australia.

4. EPIRIXANTHES * Blume

EPIRIXANTHES CYLINDRICA Blume Cat. Gew. Buitenz. (1823) 82, Flora (1825) 133; Miq. Fl. Ind. Bat. 1² (1858) 128, *t.* 15; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 203; Penzig in Ann. Jard. Bot. Buitenz. 17 (1901) 146, *t.* 20-23.

Salomonina cylindrica Kurz in Journ. As. Soc. Beng. 43¹ (1874) 79.

Luzon (Benguet, Laguna, Sorsogon), Negros, Mindanao. On slopes in primary forests at low and medium altitudes; rare or at least very difficult to detect. Malay Peninsula, Sumatra, Java, Borneo, New Guinea.

Local name: Bunokbañgat (Bag.).

5. XANTHOPHYLLUM Roxburgh

XANTHOPHYLLUM BRACTEATUM Chodat in Bull. Herb. Boiss. 4 (1896) 258.

Luzon (Laguna, Tayabas, Camarines), *B. S.* 28512, 33774, 33575, 33680 *Ramos & Edaño*, (*Vidal* 968). In primary forests at low and medium altitudes. Endemic.

Local name: Duróg (Tag.).

XANTHOPHYLLUM CORDATUM Korth. in Ann. Mus. Bot. Lugd.-Bat. 1 (1863-64) 274.

Xanthophyllum palawanense Elm. Leaf. Philip. Bot. 5 (1913) 1673.

Palawan, *Elmer* 12931, 13170, *F. B.* 21572 *Danao*. In forests at low and medium altitudes. Borneo.

XANTHOPHYLLUM EXCELSUM (Bl.) Miq. Fl. Ind. Bat. 1² (1858) 129. *Jackia excelsa* Blume Bijdr. (1825) 62.

Xanthophyllum affine Korth. ex Miq. Ann. Mus. Bot. Lugd.-Bat. 1 (1864) 271; F.-Vill. Novis. App. (1880) 14; King in Journ. As. Soc. Beng. 59² (1890) 142.

* Spelled by various other authors *Epirhizanthos*, *Epirhizanthus*, *Epirhizantho*, *Epirrhizanthos*, *Hyperizanthos*, and *Epieryanthos*.

Xanthophyllum glandulosum Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 34; Gagnep. in Journ. de Bot. II 1 (1908) 252.

Xanthophyllum multiramum Elm. Leaflet. Philip. Bot. 5 (1913) 1676.

Luzon (Cagayan, Benguet, Zambales, Bataan, Rizal, Laguna, Sorsogon), Mindoro, Busuanga, Culion, Palawan, Guimaras, Masbate, Negros, Mindanao (Zamboanga). In primary forests at low and medium altitudes. Tenasserim to the Malay Peninsula, Sumatra, Borneo, and Java.

Local names: Anono (Tag.); bagaulán (Tag.); baníg (Tag.); barakbák (Ilk.); batobato-babáe (P. Bis.); bokbók (Tag., C. Bis.); bultigito (Ig.); butoñgan (Tag.); dayap-gúbat (Bis.); kabot (Tag.); malagitung-gitung (Tag.); managbak (Tagb.); mogbok (Bis.); pagpágan (Ilk.).

XANTHOPHYLLUM PHILIPPINENSE Chodat in Bull. Herb. Boiss. 4 (1896) 261.

Luzon (Cagayan, Bataan, Nueva Ecija, Zambales, Albay), *F. B. 24831 Barros, 12954, 22139 Alvarez, 17538 Curran*. In primary forests at low altitudes. Endemic.

Local names: Karamai (Neg.); malatadiáng (Tag.).

XANTHOPHYLLUM PSEUDOSTIPULACEUM Merr. in Philip. Journ. Sci. 10 (1915) Bot. 316.

Luzon (Isabela, Nueva Ecija, Bulacan), *B. S. 21135 Escritor, 34118 Ramos & Edaño, F. B. 22403 Alvarez*. On forested slopes at low altitudes. Endemic.

XANTHOPHYLLUM ROBUSTUM Chodat in Bull. Herb. Boiss. 4 (1896) 262.

Xanthophyllum flavescens F.-Vill. Novis. App. (1880) 14; Vidal Sinopsis Atlas (1883) 13, t. 9, f. B, non Roxb.

Xanthophyllum griffithii Rolfe in Journ. Bot. 23 (1885) 210; Vidal Rev. Pl. Vasc. Filip. (1886) 51, non Hook. f.

Luzon (Cagayan, Ilocos Norte, Tayabas, Rizal, Laguna, Camarines, Albay), Mindoro, Leyte, Panay, Mindanao, *B. S. 2629 Ramos, F. B. 6819 Merritt, 3167 Ahern's collector, Warburg 12366*. In primary forests at low and medium altitudes.

The specimens cited have been identified by Chodat; in the original description of the species he states: "In Malacca, Borneo et Philippinis * * * Hb. Kew.," but he apparently failed to write up the sheets in the Kew Herbarium, so that there is some doubt as to the actual type and, further, whether the Philippine form is really identical with the Malacca and Bornean ones.

Local names: Bokbók (Tag.); dugi (Ilk.); kamót (Ilk.); daramai (Neg.); pugáui (Tag.); sagaksák (Neg.).

DICHAPETALACEAE

1. DICHAPETALUM Thouars

DICHAPETALUM CILIATUM Merr. in Philip. Journ. Sci. 7 (1912) Bot. 279.

Mindanao (Zamboanga), Siargao, *F. B. 9139, 9234 Whitford & Hutchinson, B. S. 11819 Robinson, 34987, 34951 Ramos & Edaño*. In forests at low altitudes. Endemic.

DICHAPETALUM EUPHLEBIUM Merr. in Philip. Journ. Sci. 20 (1922) 391.

Mindanao (Zamboanga), *B. S.* 37284, 36702 Ramos & Edaño. In secondary forests at low altitudes. Endemic.

DICHAPETALUM GLABRUM Elm. Leaf. Philip. Bot. 2 (1908) 483.

Leyte, *Elmer* 7275, *Wenzel* 282, 342, 1282, 1518. In forests at low altitudes. Endemic.

DICHAPETALUM HOLOPETALUM Merr. in Philip. Journ. Sci. 17 (1920) 271.

Mindanao (Lanao), *Clemens* 1039, *F. B.* 23320 Agama, 23382 Acuña. In thickets and forests up to 670 m altitude. Borneo.

DICHAPETALUM LUZONIENSE Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 106.

Luzon (Bataan, Rizal, Laguna, Batangas, Camarines), *F. B.* 24291 Bawan & Borromeo, 3157 Ahern's collector, 27091 Mabesa, 21542 Tamesis, *B. S.* 33481, 33465, 33506 Ramos & Edaño, 1128 Ramos. In secondary forests at low and medium altitudes. Endemic.

DICHAPETALUM MONOSPERMUM Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 34.

Mindoro, Palawan, Sibuyan, *Merrill* 1801, 3323, *McGregor* 230, *Cuming* 1551, *F. B.* 6177, 6807 Merritt, 11870 Amarillos, *Elmer* 12616, 12121, 12211, *B. S.* 39365, 39518, 39708 Ramos. In forests at low altitudes. Endemic.

Cochinchina material referred here by Pellegrin in Lecomte Fl. Gen. Indo-Chine 1 (1911) 798, *Thorel* 608, does not appear to me to represent this species.

Local names: Bagakolon (P. Bis.); buta-buta (Tagb.); makahaboi (P. Bis.).

DICHAPETALUM NITIDUM Merr. in Philip. Journ. Sci. 17 (1920) 270.

Mindanao (Surigao), *B. S.* 34596 Ramos & Pascasio. In forests at low altitudes. Endemic.

DICHAPETALUM OBLONGIFOLIUM Merr. in Philip. Journ. Sci. 17 (1920) 271.

Bucas Grande, *B. S.* 35044 Ramos & Pascasio. In thickets along streams at low altitudes. Endemic.

DICHAPETALUM ROBINSONII Merr. in Philip. Journ. Sci. 7 (1912) Bot. 280.

Mindanao (Zamboanga), *B. S.* 11771 Robinson. In forests at low altitudes. Endemic.

DICHAPETALUM SERICEUM (Blanco) Merr. Sp. Blancoanae (1918) 215.

Quilesia sericea Blanco Fl. Filip. (1837) 177, ed. 2 (1845) 125, ed. 3, 1 (1877) 224; Miq. Fl. Ind. Bat. 1¹ (1857) 788.

Chailletia benthamiana Turcz. in Bull. Soc. Nat. Mosc. 36¹ (1863) 610; Rolfe in Journ. Bot. 23 (1885) 211; Vidal Phan. Cuming. Philip. (1885) 102.

Chailletia griffithii F.-Vill. Novis. App. (1880) 45.

Dichapetalum benthamianum Engl. in Engl. & Prantl Nat. Pflanzenfam. 3⁴ (1896) 348.

Dichapetalum olivaceum Elm. Leaf. Philip. Bot. 5 (1913) 1769.

Luzon (Ilocos Norte), Palawan, Merrill *Sp. Blancoanae* 991, *B. S.* 7721, 7710 Ramos, *Elmer* 12919. In forests and thickets along streams. Endemic.

Local name: Dekdek (Ilk.).

DICHAPETALUM SUBMARITIMUM Elm. Leaf. Philip. Bot. 4 (1912) 1493.

Sibuyan, *Elmer* 12245. In thickets and forests at low altitudes, sometimes back of the mangrove. Endemic.

Local name: Alibotbot (P. Bis.).

DICHAPETALUM TIMORIENSE (DC.) Engl. in Engl. & Prantl Nat. Pflanzenfam. 3⁴ (1896) 348.

Chaillietia timoriensis DC. Prodr. 2 (1825) 57; Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886) 85.

Mindoro, Palawan, Cebu, Mindanao (Davao, Zamboanga, Lanao), *Cuming* 1788, *Merrill* 2254, 9398, *Clemens* 1192a, *Warburg* 14637, *F. B.* 19890 *Danao*, 9115 *Whitford & Hutchinson*, 23172, 23182 *Agama*. In forests at low and medium altitudes, ascending to 800 m. Timor and probably other parts of the Malay Archipelago.

Local name: Ariskis (Tagb.).

DICHAPETALUM TRICAPSULARE (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 35, Philip. Journ. Sci. 1 (1906) Suppl. 74, 2 (1907) 432, *Sp. Blancoanae* (1918) 215.

Riana ? *tricapsularis* Blanco Fl. Filip. (1837) 850, ed. 2 (1845) 126, ed. 3, 1 (1877) 225.

Luzon (Zambales, Bataan, Bulacan), Camiguin de Mindanao, *Merrill* 5190, 3191, *Williams* 441, *Elmer* 6642, *B. S.* 26852, 26851 *Edaño*, *F. B.* 8121 *Curran & Merritt*, 27295 *Udasco*, 145 *Barnes*, 2824 *Meyer*. In primary forests at low and medium altitudes. Endemic.

EXCLUDED SPECIES

CHAILLETIA HELFERIANA Kurz; F.-Vill. Novis. App. (1880) 45.

CHAILLETIA GELONIODES Hook. f.; F.-Vill. l. c.

EUPHORBIACEAE

1. ANDRACHNE Linnaeus

ANDRACHNE AUSTRALIS Zoll. & Mor. in Nat. Geneesk. Arch. Neerl. Ind. 2. (1845) 17; Muell.-Arg. in DC. Prodr. 15² (1866) 235, quoad Philip.; F.-Vill. Novis. App. (1880) 187; Vidal Phan. Cuming. Philip. (1885) 141 (incl. var. *angustifolia* Muell.-Arg.); Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 172.

Andrachne fruticosa Decne in Nov. Ann. Mus. Paris 3 (1835) 484; Muell.-Arg. in DC. Prodr. 15² (1866) 235; Hook. f. Ic. III 8 (1887) t. 1704, non Linn.

Luzon (Isabela, Ilocos Norte, Ifugao), Mindoro, Golo, Palawan, Masbate, Mindanao (Misamis), *Cuming* 1528, 1600, *Merrill* 3023, 11538, *B. S.*

7985, 33223, 27530, 41055 *Ramos*, 20009 *McGregor*. On slopes and in thickets at low and medium altitudes, rare or at least very local. Malay Peninsula, Indo-China, Java.

2. ACTEPHILA Blume

ACTEPHILA EXCELSA (Dalz.) Muell.-Arg. var. **JAVANICA** (Miq.) Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 192.

Actephila javanica Miq. Fl. Ind. Bat. 1² (1859) 359.

Actephila dispersa Merr. in Philip. Journ. Sci. 4 (1909) Bot. 276; Elm. Leaf. Philip. Bot. 4 (1911) 1273.

Actephila gitingensis Elm. Leaf. Philip. Bot. 3 (1910) 903.

Pimeleodendron dispersum Elm. Leaf. Philip. Bot. 1 (1908) 308; Pax in Engl. Pflanzenreich 52 (1912) 56.

Actephila gigantifolia Merr. in Philip. Bureau Forestry Bull. 1 (1903) 29, non (?) Koord.

Luzon (Cagayan), Palawan, Bancalan, Sibuyan, Leyte, Siargao, Dinagat, Mindanao, Jolo, *Elmer* 7215, 12621, 12141, *F. B.* 17047 *Curran*, 26592 *Sandique*, *B. S.* 13936 *Ramos*, 34832, 35249 *Ramos & Pascasio*, 36673, 37417, 36657 *Ramos & Edaño*. In primary forests at low and medium altitudes. Java, Borneo, the species in India and Ceylon.

Local names: Toyokan (C. Bis.); lambonan (Tagb.); lita (Sub.); tungkaling (Sub.).

ACTEPHILA MAGNIFOLIA Elm. Leaf. Philip. Bot. 3 (1910) 904; Pax & Hoffm. in Engl. Pflanzenreich 81 (1922) 193.

Sibuyan, Luzon (Camarines), *Elmer* 12303, *B. S.* 22154 *Ramos*. In primary forests at low altitudes, ascending to 300 m. Endemic.

Local name: Tuman (P. Bis.).

3. SECURINEGA Commerson

SECURINEGA FLEXUOSA Muell.-Arg. in DC. Prodr. 15² (1866) 450; Merr. in Philip. Journ. Sci. 9 (1914) Bot. 491.

Flüggea flexuosa Muell.-Arg. in Linnaea 34 (1865) 76; F.-Vill. Novis. App. (1880) 189; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 238; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 74.

Phyllanthus acuminatissimus C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 200.

Securinega acuminatissima C. B. Rob. op. cit. 4 (1909) Bot. 73.

Luzon (Tayabas, Camarines, Sorsogon), Samar, Leyte, Negros, Bohol, Cebu, Camiguin de Misamis, Mindanao (Surigao, Agusan, Bukidnon, Davao, Misamis). In primary forests at low altitudes. Endemic.

Local names: Anislág (Bik., S. L. Bis., C. Bis., Mbo., Mand.); anisláng (Bik.); hamislág (Bik.); katamañgan (Mbo.); malañgau (Mbo.); tras (Mag.).

4. FLUGGEE Willdenow

FLUGGEE VIROSA (Roxb.) Baill. Étud. Gén. Euphorb. (1858) 593; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 415, Fl. Manila (1912) 289, Sp. Blancoanae (1918) 215; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 74; Elm. Leaf. Philip. Bot. 4 (1911) 1287.

Phyllanthus virosus Roxb. ex Willd. Sp. Pl. 4 (1805) 578.

Xylophylla obovata Willd. Enum. Hort. Berol. (1809) 329.

Flüggea obovata Wall. ex F.-Vill. Novis. App. (1880) 189; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 238; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 74.

Flüggea microcarpa Blume Bijdr. (1825) 580.

Cicca pentandra Blanco Fl. Filip. (1837) 701, ed. 2 (1845) 486, ed. 3, 3 (1879) 105.

Securinega microcarpa Muell.-Arg. in DC. Prodr. 15² (1866) 434; Ceron Cat. Pl. Herb. Manila (1892) 149.

Securinega obovata Muell.-Arg. in DC. Prodr. 15² (1866) 449.

Flüggea leucopyrus F.-Vill. Novis. App. (1880) 189, non Willd.

Securinega ovata Vidal Cat. Pl. Prov. Manila (1880) 44, sphalm.

Throughout the Philippines in dry thickets at low and medium altitudes; common. Tropical Africa through India to China and Malaya to tropical Australia.

Local names: Arusít (Ilk.); barasiksík (Ilk.); barsít (Ig.); barsík (Ilk.); barusík (Ilk.); bayasít (Tag.); boisét (Tag.); botolan (Tag.); bugbugutut (Ig.); kabukabukas (Mag.); magaspáng (P. Bis.); máluuit (Ibn.); tulitañgalong (P. Bis.).

5. PHYLLANTHUS Linnaeus

PHYLLANTHUS APICULATUS Merr. in Philip. Journ. Sci. 16 (1920) 540.

Luzon (Camarines), *B. S. 33813 Ramos & Edaño*. In forests at low altitudes. Endemic.

PHYLLANTHUS BENGUETENSIS C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 78; Merr. op. cit. 5 (1910) Bot. 356.

Luzon (Lepanto, Bontoc, Benguet), *Williams 1081, 966, Merrill 6528, 9684, Elmer 6632 p. p., B. S. 5520 Ramos, 14117 Robinson, 37917 Ramos & Edaño*. On dry open banks, altitude 1,200 to 1,600 m. Endemic.

PHYLLANTHUS BLANCOANUS Muell.-Arg. in Linnaea 32 (1863) 49; DC. Prodr. 15² (1866) 420; F.-Vill. Novis. App. (1880) 189; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 74, 2 (1907) Bot. 435, Sp. Blancoanae (1918) 217; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 83.

Phyllanthus niruri Blanco Fl. Filip. (1837) 690, non Linn.

Phyllanthus tetrande Blanco op. cit. ed. 2 (1845) 480, ed. 3, 3 (1879) 95, non Roxb.

Luzon (Pangasinan, Pampanga, Rizal, Bataan), *Merrill 3880, 3179, 3751, Phil. Pl. 784, Sp. Blancoanae 160, Loher 6847, Williams 423*. On forested slopes and ridges, altitude 600 to 1,000 m. Endemic.

PHYLLANTHUS BUXIFOLIUS (Blume) Muell.-Arg. in Linnaea 32 (1863) 50; DC. Prodr. 15² (1866) 426; F.-Vill. Novis. App. (1880) 189; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 236; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 74; C. B. Rob. op. cit. 4 (1909) Bot. 85; Elm. Leaf. Philip. Bot. 3 (1910) 927. *Scepasma buxifolium* Blume Bijdr. (1825) 583.

Luzon (Cagayan, Isabela, Bontoc, Benguet, Pangasinan, Tayabas, Bataan, Rizal, Laguna), Alabat, Leyte, Cebu. In primary forests, often along streams at low altitudes, in Benguet ascending to 1,800 m. Java.

Local names: Baliñgasag (S. L. Bis.); fugayúng (Ibn.); lagíren (Ibn.); marasapapi (Tag.); agauyoi (Tag.).

PHYLLANTHUS CORDATULUS C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 76.

Luzon (Zambales), *B. S. 5106 Ramos*. Endemic.

PHYLLANTHUS CURRANII C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 77.

Luzon (Cagayan, Ilocos Norte, Nueva Vizcaya, Pampanga, Rizal), *F. B. 10889 Curran, 18027 Merritt, B. S. 33202 Ramos, 5175 Foxworthy, Loher 4770*. In primary forests, altitude 700 to 900 m. Endemic.

Local name: Baluha (If.).

PHYLLANTHUS DUMOSUS C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 79.

Luzon (Ilocos Norte), *F. B. 13978, 13974 Merritt & Darling*. On exposed ridges, altitude about 1,100 m. Endemic.

PHYLLANTHUS ERYTHROTRICHUS C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 80, 6 (1911) Bot 333.

Luzon (Cagayan, Ilocos Norte, Ifugao, Bontoc, Benguet, Tayabas, Pampanga, Rizal), Panay, *F. B. 16834, 10996 Curran, B. S. 33220 Ramos & Edaña, Merrill Phil. Pl. 47*. On open slopes, at low altitudes, ascending to 1,300 m. Endemic.

Local name: Gomgom (If.).

PHYLLANTHUS EVERETTII C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 80.

Luzon (Nueva Vizcaya, Tayabas), Negros, *F. B. 4301 Everett, 19412 Curran, B. S. 13306 Ramos, Merrill 164, 2885*. On forested stream banks at low and medium altitudes. Endemic.

Local name: Miagos (P. Bis.).

PHYLLANTHUS GLOCHIDIoidES Elm. Leaf. Philip. Bot. 4 (1911) 1302.

Palawan, *Elmer 13104*. Along streams in shaded ravines at low altitudes. Endemic.

PHYLLANTHUS GREENEI Elm. Leaf. Philip. Bot. 3 (1910) 929.

Luzon (Batangas), Sibuyan, *Elmer 12399, Merrill 10645*. In ravines about boulders, sea level to an altitude of 500 m; very local. Endemic.

PHYLLANTHUS INDICUS (Dalz.) Muell.-Arg. in Linnaea 32 (1863) 52; DC. Prodr. 15² (1866) 417; Merr. in Philip. Journ. Sci. 16 (1920) 541.

Prosorus indicus Dalz. in Hook. Kew Journ. Bot. 4 (1852) 346.

Luzon (Cagayan, Camarines), Palawan, Mindanao, *B. S. 15589 Fénix, F. B. 22655 Alvarez, 9237 Whitford & Hutchinson, 23361 Natividad, 22943*

Miranda, 27438 *Alejandro*, *Weber* 1195. In primary forests at low altitudes. India, Ceylon, Java.

Local names: Buñgas (P. Bis.); bakap (Mbo.); manglas (Tagb.); maraséda (Ilk.).

PHYLLANTHUS LACINIATUS C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 84.

Luzon (Tayabas, Albay, Batan Island), Samar, *B. S.* 6230 *Robinson*, 25584 *Yates*, 17466 *Ramos*, *F. B.* 28670 *Bautista*. In forests at low altitudes. Endemic.

Local name: Laioán (Bik.).

PHYLLANTHUS LAMPROPHYLLUS Muell.-Arg. in DC. Prodr. 15² (1866) 324; *F.-Vill. Novis. App.* (1880) 188; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 76; *Elm. Leaf. Philip. Bot.* 4 (1911) 1302.

Palawan, *F. B.* 4156 *Curran*, *B. S.* 12733 *Elmer*. Along streams at low altitudes. Java.

PHYLLANTHUS LANCIFOLIUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 489.

Samar, Siquijor, *B. S.* 17465 *Ramos*, *Piper* 382. On dry slopes. Endemic.

PHYLLANTHUS LEYTENSIS *Elm. Leaf. Philip. Bot.* 1 (1908) 307; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 85.

Leyte, *Elmer* 7267, *Wenzel* 1696. In forests at low altitudes. Endemic.

PHYLLANTHUS LUZONIENSIS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 404.

Luzon (Pangasinan, Pampanga, Nueva Ecija, Bataan, Batangas, Cavite), *F. B.* 17696, 8435, 8348, 8391 *Curran*, *B. S.* 17834, 17955 *Otanes*, 26282 *Ramos & Edaño*. On dry slopes at low altitudes. Endemic.

Local names: Magarau (Tag.); pamayauasen (Ilk.); pamayabásen (Ilk.).

PHYLLANTHUS MACGREGORII C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 334.

Babuyan Islands (Dalupiri), *B. S.* 10128 *McGregor*. Endemic.

PHYLLANTHUS MEGALANTHUS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 335.

Luzon (Cagayan, Ilocos Norte, Tayabas), *F. B.* 17242 *Curran*, *B. S.* 32697, 27621, 27498 *Ramos*, 25430 *Yates*, 20753 *Escritor*. In thickets and forests at low and medium altitudes. Endemic.

Local name: Bagbagútot (Ilk.).

PHYLLANTHUS MICROCARPUS (Benth.) Muell.-Arg. in *Linnaea* 32 (1863) 51; DC. Prodr. 15² (1866) 343.

Cicca microcarpa Benth. Fl. Hongk. (1861) 312.

Kirganelia sinensis Baill. Étud. Gén. Euphorb. (1858) 614, *nomen nudum*.

Phyllanthus dalbergioides Wall. Cat. (1847) No. 7934, *nomen nudum*; J. J. Sm. in Meded. Dept. Landbouw 10 (1910) 67.

Babuyan Islands, Luzon (Cagayan, Ilocos Norte, Abra, Benguet, Lepanto, Isabela, Union, Bataan, Albay), Mindoro, Polillo, Negros, Mindanao. In thickets at low altitudes, often near the sea, but ascending to 1,400 m altitude; confused with *P. reticulata* Poir. India to southern China, through Malaya to Celebes, Flores, and Timor.

Local names: Bagbagútót (Ilk.); pagbagútót (Ilk.); tulug-tulug (P. Bis.).

PHYLLANTHUS MINDORENSIS C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 82.

Luzon (Nueva Vizcaya, Pampanga, Bulacan, Rizal), Mindoro, *F. B.* 5370, 8789 Merritt, 19333, 19329 Curran, 8194, 21667, 13593 Ramos, Merrill Phil. Pl. 731. In primary forests up to 800 m altitude. Endemic.

PHYLLANTHUS NIRURI Linn. Sp. Pl. (1753) 981; Muell.-Arg. in DC. Prodr. 15² (1866) 406; Miq. Fl. Ind. Bat. 1² (1858-59) 369; F.-Vill. Novis. App. (1880) 188; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 238; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 74, 3 (1908) Bot. 414, Fl. Manila (1912) 285, Sp. Blancoanae (1918) 216; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 81.

Phyllanthus carolinianus Blanco Fl. Filip. (1837) 691, non Walt.

Phyllanthus kirganelia Blanco op. cit. ed. 2 (1845) 480, ed. 3, 3 (1879) 96, non Willd.

? *Kirganelia pumila* Blanco Fl. Filip. (1837) 713, ed. 2 (1845) 493, ed. 3, 3 (1879) 117.

? *Phyllanthus pumilus* Muell.-Arg. in DC. Prodr. 15² (1866) 349; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 81, 86.

Throughout the Philippines at low and medium altitudes, a common weed. Pantropic, but probably introduced in the New World.

Local names: Kurukalunggái (Bik.); malakirum-kirum (S. L. Bis.); ñgingihel (If.); sampasampalúkan (Tag.); San Pedro (P. Bis.); suru-sampálok (Bik.); talikód (Ilk.); taltalikod (Ilk.); turutalikod (Bik.).

PHYLLANTHUS PANAYENSIS Merr. in Philip. Journ. Sci. 16 (1920) 539.

Panay, *B. S.* 35655, 35679 Ramos & Edaña. In forests, altitude about 650 m. Endemic.

PHYLLANTHUS RETICULATUS Poir. in Lam. Encycl. 5 (1804) 298; Muell.-Arg. in DC. Prodr. 15² (1866) 344; F.-Vill. Novis. App. (1880) 188; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 29, Govt. Lab. Publ. (Philip.) 27 (1905) 76, Philip. Journ. Sci. 1 (1906) Suppl. 75, 3 (1908) Bot. 414, 5 (1910) Bot. 356, Fl. Manila (1912) 284, Sp. Blancoanae (1918) 216; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 77.

Cicca decandra Blanco Fl. Filip. (1837) 701, ed. 2 (1845) 487, ed. 3, 3 (1879) 106, t. 239.

Phyllanthus chamissonis Klotz. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 420.

Throughout the Philippines in thickets at low and medium altitudes, usually common. India to southern China and Formosa southward through Malaya to Timor and Celebes.

Local names: Malatinta (Tag.); matáng-buiúd (Bik.); nípin (Sul.); sunḡot-ólang (Bis.); tinatináan (Tag.); tintatintáhan (Tag., Bik.).

PHYLLANTHUS ROBINSONII Merr. in Philip. Journ. Sci. 7 (1912) Bot. 405.

Cebu, *B. S. 11058 Ramos*. On dry slopes. Endemic.

PHYLLANTHUS RUPICOLA Elm. Leaf. Philip. Bot. 3 (1910) 927.

Sibuyan, Cebu, Panay, *Elmer 12240, Merrill 6709, B. S. 11077 Ramos*. On shaded cliffs and on bowlders along streams, altitude 100 to 225 m. Endemic.

PHYLLANTHUS SAMARENSIS Muell.-Arg. in Linnaea 34 (1865) 73, DC. Prodr. 15² (1866) 295; F.-Vill. Novis. App. (1880) 188; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 79.

Samar, *Jagor, B. S. 24460 Ramos*. In damp ravines along streams at low altitudes. Endemic.

Local name: Malaantagum (S. L. Bis.).

PHYLLANTHUS SECURINEGIOIDES Merr. in Philip. Journ. Sci. 9 (1914) Bot. 490.

Phyllanthus urdanetensis Elm. Leaf. Philip. Bot. 7 (1915) 2650.

Luzon (Tayabas), Mindanao (Agusan), *Elmer 13936, 14163, B. S. 20725 Escritor, 13270 Ramos*. In forests at low altitudes in Tayabas, ascending to 1,500 m in Mindanao.

Local names: Halong-halong (Mbo.); kamahodan (Mbo.).

PHYLLANTHUS SIBUYANENSIS Elm. Leaf. Philip. Bot. 3 (1910) 928.

Sibuyan, *Elmer 12113*. In forested ravines along streams, altitude about 225 m. Endemic.

PHYLLANTHUS SIMPLEX Retz. Obs. 5 (1789) 29; Muell.-Arg. in DC. Prodr. 15² (1866) 391; F.-Vill. Novis. App. (1880) 188; Vidal Rev. Pl. Vasc. Filip. (1886) 236; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 81; Merr. Fl. Manila (1912) 285.

Throughout the Philippines, in open grasslands, fallow ricelands, etc., at low and medium altitudes; common. India to southern China, Malaya, and Polynesia.

Local names: Kaya-an (Bag.); kayut-búlan (Bag.).

PHYLLANTHUS STIPULARIS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 75; C. B. Rob. op. cit. 4 (1909) 82.

Luzon (Bataan), *Baker 3560, Whitford 1102, 282, Williams 608, F. B. 6280 Curran, 2841 Meyer, 2087 Borden*. On ridges and slopes in primary forests on Mount Mariveles, altitude 500 to 900 m. Endemic.

PHYLLANTHUS TENUIPES C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 78.

Luzon (Benguet), *Merrill 4419, 6680, B. S. 5758 Ramos, F. B. 15379 Bacani*. On cliffs, in ravines, and on banks, altitude 1,200 to 1,500 m. Endemic.

PHYLLANTHUS TRIPHLEBIUS C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 82.

Luzon (Nueva Vizcaya, Laguna, Rizal, Tayabas), *Topping 510, Merrill 170, B. S. 1001 Ramos, 28975 Ramos & Edaña, 23157 McGregor*. On bowl-ers and cliffs in shaded ravines along streams at low and medium altitudes. Endemic.

PHYLLANTHUS URINARIA Linn. Sp. Pl. (1753) 982; Muell.-Arg. in DC. Prodr. 15² (1866) 364; Miq. Fl. Ind. Bat. 1² (1858-59) 369; F.-Vill. Novis. App. (1880) 188; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 79; Merr. Fl. Manila (1912) 285.

Phyllanthus verrucosus Elm. Leaf. Philip. Bot. 7 (1915) 2649.

Throughout the Philippines, a weed in open waste places at low and medium altitudes. Pantropic; probably introduced in tropical America.

Local names: Apoy-apóyan ginsog (Sub.); ibaibá-an (Tag.); laiolaioán (Bik.); lurulaioán (Bik.); minuhminuh (Sul.); payog (Mbo.); surusam-pálok (Bik.); tabi (Mag.); takum-takum (P. Bis.); talindanon (Pang.); turutalikod (Bik.).

EXCLUDED SPECIES

PHYLLANTHUS COMPRESSICAULIS Muell.-Arg.; F.-Vill. Novis. App. (1880) 187.

PHYLLANTHUS ERIOCARPUS Muell.-Arg.; F.-Vill. l. c.

PHYLLANTHUS GAUDICHAUDII Muell.-Arg.; F.-Vill. l. c.

PHYLLANTHUS INSULANUS Muell.-Arg.; F.-Vill. op. cit. 188.

PHYLLANTHUS LEUCOGYNUS Muell.-Arg.; F.-Vill. op. cit. 187.

PHYLLANTHUS MARIANUS Muell.-Arg.; F.-Vill. op. cit. 188.

PHYLLANTHUS MULTILOULARIS Muell.-Arg.; F.-Vill. op. cit. 187.

PHYLLANTHUS PHILLYREAEOFOLIUS Muell.-Arg.; F.-Vill. op. cit. 188.

PHYLLANTHUS PULCHER Muell.-Arg.; F.-Vill. op. cit. 189.

6. CICCICA Linnaeus

CICCICA ACIDA (Linn.) Merr. Interpret. Herb. Amb. (1917) 314, Sp. Blancoanae (1918) 216.

Averrhoa acida Linn. Sp. Pl. (1753) 428.

Cicca disticha Linn. Mant. 1 (1767) 124; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 87, 6 (1911) Bot. 322; Merr. Fl. Manila (1912) 288.

Cicca acidissima Blanco Fl. Filip. (1837) 700, ed. 2 (1845) 486, ed. 3, 3 (1879) 105, t. 303.

Phyllanthus distichus Muell.-Arg. in DC. Monog. Phan. 15¹ (1866) 413; F.-Vill. Novis. App. (1880) 188; Vidal Sinopsis Atlas (1883)

38, t. 82, f. D, Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 237.

Phyllanthus acidissimus Muell.-Arg. in Linnaea 32 (1863) 50, DC. Prodr. 15² (1866) 417.

Phyllanthus acidus Skeels in U. S. Dept. Agr. Bur. Pl. Ind. Bull. 148 (1909) 17.

Planted in most or all parts of the Philippines for its acid edible fruits, but nowhere abundant; of prehistoric introduction from Malaya. India to Malaya and Polynesia in common cultivation, where native uncertain; introduced in tropical America.

Local names: Bagbagútut (Ilk.); bangkiling (Bis., Tag.); iba (Tag., Pamp.); kagindi (Bis.); karamái (Ilk.); karmái (Ilk., Tag.); layoan (Bik.); poras (Bis.).

7. GLOCHIDION Forster

GLOCHIDION ALBUM (Blanco) Boerl. Handl. Fl. Nederl. Ind. 3 (1900) 275; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 75, Philip. Journ. Sci. 1 (1906) Suppl. 75, Sp. Blancoanae (1918) 217; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 99; Hayata in Journ. Col. Sci. Tokyo 30¹ (1911) 264.

Kirganelia alba Blanco Fl. Filip. (1837) 713, ed. 2 (1845) 494, ed. 3, 3 (1879) 117.

Phyllanthus albus Muell.-Arg. in Flora 48 (1865) 387, DC. Prodr. 15² (1866) 306; F.-Vill. Novis. App. (1880) 188.

Zarcoa philippica Llanos in Bot. Zeit. 15 (1857) 423, Mem. Acad. Cienc. Madr. 4 (1858) 501, pl.; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 102.

Glochidion cumingii Muell.-Arg. in Linnaea 32 (1863) 61 (*cuminghii*); Merr. in Philip. Bureau Forestry Bull. 1 (1903) 29.

Phyllanthus cumingii Muell.-Arg. in Flora 48 (1865) 371, DC. Prodr. 15² (1866) 285; F.-Vill. Novis. App. (1880) 237; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 237.

Phyllanthus gigantifolius Vidal Rev. Pl. Vasc. Filip. (1886) 236, pro minore parte, quoad Vidal 1734, excl. descr.

Glochidion leytense Elm. Leaf. Philip. Bot. 1 (1908) 303.

Glochidion mindanaense Elm. op. cit. 7 (1915) 2642.

Luzon (Cagayan to Sorsogon), Mindoro, Panay, Leyte, Samar, Siargao, Dinagat, Mindanao. In primary forests at low and medium altitudes, ascending to 1,200 m. Formosa, Celebes.

Local names: Ba'gang-ba'gáng (Bik.); bognák (Mbo.); baroan (Bag.); bugná (C. Bis.); bugná-kolorádo (C. Bis.); handadaog (Mbo.); hudáan Ig.); kalnag (Tag.); obog (Bag.); polopíñon (P. Bis.).

GLOCHIDION ANGULATUM C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 91.

Leyte, Panay, Mindanao (Lanao, Davao, Zamboanga), Basilan, *F. B. 9487 Whitford & Hutchinson, Elmer 7279, Clemens, De Vore & Hoover 21, 213, B. S. 31114 Ramos & Edaña*. In thickets or forests at low altitudes. Endemic.

GLOCHIDION BENGUETENSE Elm. Leaf. Philip. Bot. 1 (1908) 304; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 97, 6 (1911) Bot. 208, 328.
Glochidion sablanense Elm. Leaf. Philip. Bot. 1 (1908) 306.

Luzon (Benguet, Bontoc, Nueva Ecija, Tayabas, Laguna), *Elmer 8770, 8665, Merrill Phil. Pl. 1720, B. S. 12709 Fénix, 26431 Ramos & Edaño, Whitford 296*. In forests and forested ravines, altitude 600 to 1,400 m. Endemic.

Local names: Pedpéd (Ilk.); petpetén (Ilk.); sangi (Ig.); sangki (Ig.).

GLOCHIDION BRACHYSTYLUM Merr. in Philip. Journ. Sci. 16 (1920) 543.

Panay, *B. S. 31374 Ramos & Edaño*. In forests along small streams at low or medium altitudes. Endemic.

GLOCHIDION BREYNIoidES C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 95.

Luzon (Cagayan, Ilocos Norte, Ilocos Sur, Pangasinan, Bataan, Rizal, Laguna, Camarines, Sorsogon), Mindoro, Palawan, Leyte, Negros, Dinagat. In forests, ascending to 1,300 m. Borneo, Moluccas.

Local names: Bagiróro (Bik.); karkarmái (Ilk.); matáng-buiú (Bik.); salanisin (Bik.).

GLOCHIDION CAGAYANENSE C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 328.

Luzon (Cagayan), *B. S. 7390 Ramos, F. B. 16715, 16726 Curran*. In forests at low altitudes. Endemic.

GLOCHIDION CAMIGUINENSE Merr. in Philip. Journ. Sci. 3 (1908) Bot. 414; C. B. Rob. op. cit. 4 (1909) Bot. 100.

Babuyan Islands (Camiguin), *B. S. 4026, 4108 Fénix*. On slopes. Endemic.

GLOCHIDION CANESCENS Elm. Leaf. Philip. Bot. 8 (1919) 3082.

Luzon (Laguna), *F. B. 25397 Mabesa, Gates 5235*. In low wet places along the shores of Lake Bay. Endemic.

GLOCHIDION CAULIFLORUM Merr. in Philip. Journ. Sci. 16 (1920) 545.

Leyte, Mindanao (Lanao, Zamboanga), *B. S. 15352 Ramos, 36611, 36630 Ramos & Edaño, F. B. 25183 Alvarez*. In primary forests at medium altitudes. Endemic.

GLOCHIDION CORONULATUM C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 94.

Glochidion balsahanense Elm. Leaf. Philip. Bot. 4 (1911) 1289.

Luzon (Cagayan, Ilocos Norte, Abra, Benguet, Nueva Ecija), Leyte, Palawan, *F. B. 13937, 13948, 12498 Merritt & Darling, 20059 Curran, B. S. 7102, 5830 Ramos, 26284 Ramos & Edaño, Elmer 12856*. In second-growth forests and thickets at low altitudes. Endemic.

GLOCHIDION CURRANII C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 102, 6 (1911) Bot. 329.

Culion, Palawan, *F. B. 3502, 3474 Curran, B. S. 783, 906 Foxworthy, 235 Bermejós, Merrill 696*. In thickets at low altitudes. Endemic.

GLOCHIDION DOLICHOSTYLUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 483.

Palawan, *Merrill 9408*. In forests at low altitudes. Endemic.

GLOCHIDION FALCATILIMBUM Merr. in Philip. Journ. Sci. 16 (1920) 542.

Luzon (Pangasinan), *B. S. 30056 Félix*. On open slopes, altitude about 60 m. Endemic.

GLOCHIDION GIGANTIFOLIUM (Vidal) comb. nov.

Phyllanthus gigantifolius Vidal Rev. Pl. Vasc. Filip. (1886) 237, quoad descr. et Vidal 1743, excl. Vidal 1734.

Luzon (Ilocos Norte, Ifugao, Zambales, Pangasinan, Rizal, Bataan, Laguna, Tayabas), Negros, Mindanao (Zamboanga), *F. B. 3374 Ahern's collector, 1765 Borden, 20013 Topacio, B. S. 27337, 13394 Ramos, 20027 McGregor, 29940 Félix, Merrill 1681, 1329, Loher 4754, 6855*. In primary forests at low and medium altitudes. Endemic.

GLOCHIDION GLAUDESCENS Merr. in Philip. Journ. Sci. 8 (1913) Bot. 381.

Leyte, *Wenzel 188*. In forests at low altitudes. Endemic.

GLOCHIDION HUMILE Merr. in Philip. Journ. Sci. 16 (1920) 544.

Mindanao (Bukidnon), *B. S. 26112 Félix, 38450 Ramos & Edaña*. In open grasslands at medium altitudes. Endemic.

GLOCHIDION LANCIFOLIUM C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 90.

? *Kirganelia nigrescens* Blanco Fl. Filip. (1837) 712, ed. 2 (1845) 493, ed. 3, 3 (1879) 115; Merr. Sp. Blancoanae (1918) 218.

? *Phyllanthus nigrescens* Muell.-Arg. in DC. Prodr. 15² (1866) 348. *Glochidion subangulatum* Elm. Leaf. Philip. Bot. 7 (1915) 2644.

Luzon (Cagayan to Camarines), Mindoro, Polillo, Leyte, Panay, Mindanao, Basilan. In forests and in forested ravines at low and medium altitudes. Endemic.

Local names: Analdong (Pang.); bugná (Bik., S. L. Bis., P. Bis.); dampul (Tag.); kakaua (Tag.); kaluag (Tag.); mambulau (P. Bis.); sibulau (P. Bis.); sarirab (Bag.).

GLOCHIDION LATISTYLUM C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 93.

Mindanao (Lanao), *Clemens 340*. On slopes, altitude about 800 m. Endemic.

GLOCHIDION LIGULATUM C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 329.

Luzon (Ilocos Norte), *B. S. 7746 Ramos*. In forests. Endemic.

GLOCHIDION LITTORALE Blume Bijdr. (1825) 585; Miq. Fl. Ind. Bat. 1² (1858-59) 377; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 30, Philip. Journ. Sci. 1 (1906) Suppl. 75; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 92, 6 (1911) Bot. 208; Elm. Leaf. Philip. Bot. 4 (1911) 1288.

Phyllanthus littoralis Muell.-Arg. in Flora 48 (1865) 370, DC. Prodr. 15² (1866) 280.

Luzon (Tayabas), Polillo, Mindoro, Palawan, Leyte, Panay, Mindanao, Jolo. In thickets along the seashore and along tidal streams. India to Java and Borneo.

Local names: Kayong (Bis.); kayongkong (P. Bis.); nigad (Sul.); padi-padi (Tagb.); sagasa (C. Bis.); tabaṅgo (Tagb.).

GLOCHIDION LLANOSII Muell.-Arg. in Linnæa 32 (1863) 68; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 75, Philip. Journ. Sci. 1 (1906) Suppl. 75, Sp. Blancoanae (1918) 217; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 94.

Kirganelia villosa Blanco Fl. Filip. (1837) 712, ed. 2 1845) 493, ed. 3, 3 (1879) 116, t. 399, non *Glochidion villosum* Miq.

Phyllanthus llanosii Muell.-Arg. in Flora 48 (1865) 387, DC. Prodr. 15² (1866) 308; F.-Vill. Novis. App. (1880) 188; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 237.

Phyllanthus pubescens Klotz. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 420, non Moon.

Glochidion molle Merr. in Philip. Bureau Forestry Bull. 1 (1903) 23, non Blume.

Phyllanthus mollis F.-Vill. Novis. App. (1880) 188, non Muell.-Arg. *Sauropus llanosii* Gage in Rec. Bot. Surv. India 9 (1922) 223.

Luzon (Isabela, Ilocos Norte, Pangasinan, Nueva Ecija, Bulacan, Zambales, Bataan, Rizal, Laguna, Camarines), Panay, Bohol, Mindanao (Bukidnon, Davao). In open forests at low altitudes. Malay Peninsula.

Local names: Banitan (Tag.); kamiaskamiásan (Tag.); malakámias (Tag.); talikúd (Tag.); taltalikód (Pang.).

GLOCHIDION LONGISTYLUM C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 96.

Luzon (Zambales), *B. S. 5057* Ramos. At low altitudes. Endemic.

GLOCHIDION LUZONSENSE Elm. Leaf. Philip. Bot. 1 (1908) 301; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 100; Merr. op. cit. 5 (1910) Bot. 356.

Luzon (Ilocos Norte, Ilocos Sur, Bontoc, Benguet, Nueva Vizcaya, Union, Pangasinan, Nueva Ecija, Tarlac, Zambales, Rizal, Bataan, Laguna). In forested ravines at low and medium altitudes, ascending to 1,400 m. Endemic.

Local names: Apaped (Bon.); gaṅgaṅgan (Bon.); kakadli (Tag.); kalambonóg (Ilk.); marabakét (Ilk.); pedpéd (Ig., Ilk.); perpér (Pang.); pidpíd (Ilk.); salsáleng (Bon.).

GLOCHIDION MALINDANGENSE Merr. ex C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 101.

Mindanao (Misamis), *F. B. 4696* Mearns & Hutchinson. In forests, altitude about 1,600 m. Endemic.

GLOCHIDION MERRILLII C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 100; Merr. op. cit. 5 (1910) Bot. 356.

Luzon (Benguet, Laguna), *Williams 1356*, *Merrill 4804*, *7520*, *B. S. 31718* Santos. In forests, altitude 1,500 to 2,000 m. Endemic.

Local name: Pudpúd (Ig.).

GLOCHIDION MINDORENSE C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 98, 6 (1911) Bot. 208.

Luzon (Tayabas), Polillo, Mindoro, Palawan, Samar, Leyte, *F. B. 12031 Merritt, 21628 Lopez, 12223 Rosenbluth, B. S. 9293 Robinson, Merrill 9382*. In thickets and forests at low altitudes. Endemic.

Local name: Litok (S. L. Bis.).

GLOCHIDION MOLLE Blume Bijdr. (1825) 586; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 95; Elm. Leaf. Philip. Bot. 4 (1911) 1288.

Phyllanthus mollis Muell.-Arg. in Flora 48 (1865) 387, DC. Prodr. 15² (1866) 308; Vidal Rev. Pl. Vasc. Filip. (1886) 236.

Mindanao (Lanao, Davao, Zamboanga), Palawan, Basilan, Jolo, *F. B. 9161 Whitford & Hutchinson, 27763 De la Cruz, Elmer 12605*. In thickets and forests at low altitudes. Java, Celebes.

Local names: Bugná (Sul.); piaas (Tag.); ubal (Sul.).

GLOCHIDION NITIDUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 483.

Luzon (Laguna, Tayabas, Camarines), Polillo, Samar, *B. S. 20543 Ramos, F. B. 25568 Duldulao, 21753 Fischer, 20490 Villamil, Elmer 17750, 17910*. On forested slopes at low and medium altitudes. Endemic.

Local name: Bagnang-gúbat (Tag.).

GLOCHIDION PALAWANENSE Elm. Leaf. Philip. Bot. 4 (1911) 1290.

Palawan, *Elmer 12804*. In forests along streams, altitude about 150 m. Endemic.

GLOCHIDION PHILIPPICUM (Cav.) C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 103; J. J. Sm. in Koord. & Val. Bijdr. Boom. Java 12 (1910) 139; Merr. Sp. Blancoanae (1918) 218.

Bradleya philippica Cav. Ic. 3 (1797) 48, t. 371; Spreng. Syst. 3 (1826) 19.

Bradleya philippensis Willd. Sp. Pl. 4 (1805) 592.

Gyrostemon blancoi Llanos Frag. Fl. Filip. (1851) 74; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 58.

Phyllanthus philippinensis Muell.-Arg. in Flora 48 (1865) 376 (incl. var. *mollis* Muell.-Arg.), DC. Prodr. 15² (1866) 295 (incl. var. *mollis*, *pubescens*, et *glaber*); F.-Vill. Novis. App. (1880) 187; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 236.

Glochidion philippinense Benth. Fl. Hongk. (1861) 314; Muell.-Arg. in Linnaea 32 (1863) 65.

Northern Luzon (Cagayan) to Mindanao and Palawan. Common in thickets, forested ravines, etc., at low and medium altitudes. Formosa to Sumatra, Java, Celebes, and New Guinea.

Local names: Alipapó (Ibn.); anám (Ilk.); antobanag (Tag.); bagná (Tag.); baringkokórun (Sbl.); bonot-bónot (C. Bis.); bugná (C. Bis.); dampól (Tag.); gádil (Ilk.); hamugun (P. Bis., Tag.); ibaibáan (Tag.); kágil (Neg.); kalian (Tag.); kásin (Neg.); kásil (Ibn.); matang-hípon (Tag.); piás (Ilk.); polumanáyen (Ig.); takuanis (P. Bis.); tayom-táyom (Tag.); uang-uang (Tag.); yamog-yamog (P. Bis.).

GLOCHIDION PHYLLANTHOIDES Merr. in Philip. Journ. Sci. 16 (1920) 541.

Luzon (Batangas), *B. S. 22358 Ramos*. On dry slopes, altitude about 190 m. Endemic.

GLOCHIDION PSIDIOIDES C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 92.

Luzon (Abra, Bontoc, Benguet, Union, Nueva Vizcaya), *F. B. 4856 Curran, B. S. 31729 Santos, 14010 Robinson, 20072 McGregor, 37654 Ramos & Edaño, Merrill 9640*. In thickets on ridges and about boulders and ledges, altitude 1,200 to 2,000 m. Endemic.

Local names: Anám (Ig.); kupkupít (Bon.); ped-péd (Ilk.); sudsúd (Ig.).

GLOCHIDION PULGARENSE Elm. Leaf. Philip. Bot. 4 (1911) 1291.

Palawan (Mt. Pulgar), *Elmer 13215, F. B. 3868 Curran*. On exposed ridges, altitude about 1,300 m. Endemic.

GLOCHIDION RETICULATUM Elm. Leaf. Philip. Bot. 1 (1908) 302; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 104.

Luzon (Laguna, Cavite), *Elmer 8198, Baker 2697, Alberto, B. S. 22491 Ramos & Deroy, F. B. 28942 Willie & Salvosa*. In thickets at low altitudes. Endemic.

GLOCHIDION ROBINSONII Elm. Leaf. Philip. Bot. 7 (1915) 2643.

Luzon (Apayao, Benguet, Rizal, Laguna, Sorsogon), Leyte, Panay, Siargao, Mindanao (Agusan, Cotabato, Davao), *Elmer 6189, 11243, 15307 as G. sorsogonense Elm., Wenzel 1108, 978, Baker 2424, F. B. 405 Ahern's collector, B. S. 20407 Ramos, 34931 Ramos & Pascasio, 12734 Fénix*. In thickets and second-growth forests at low and medium altitudes. Endemic.

Local name: Kelkel (Ig.).

GLOCHIDION RUBRUM Blume Bijdr. (1825) 586; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 101; Merr. Fl. Manila (1912) 286.

Phyllanthus diversifolius Miq. Fl. Ind. Bat. Suppl. (1861) 448; Muell.-Arg. in DC. Prodr. 15² (1866) 297; F.-Vill. Novis. App. (1880) 187; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 236.

Glochidion diversifolium Merr. in Philip. Bureau Forestry Bull. 1 (1903) 29.

Northern Luzon (Cagayan) to Palawan and Mindanao. In thickets and secondary forests at low and medium altitudes. Malay Peninsula, Sumatra, Java, Borneo.

Local names: Barabakít (Ilk.); bonot-bónot (C. Bis.); bugná (P. Bis.); dampól (Tag.); gayang-bakíro (Tag.); kabarauan (Sul.); karmái (Tag.); matang-hipon (Tag.); sulad-bágio (Sul.); tōṅgau-tōṅgau (P. Bis.).

GLOCHIDION SUBFALCATUM Elm. Leaf. Philip. Bot. 1 (1908) 305; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 98.

Luzon (Benguet, Pangasinan), *Elmer 6221, 8915*. On dry ridges at medium altitudes. Endemic.

Local name: Nadong (Pang.).

GLOCHIDION TRIANDRUM (Blanco) C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 92; Elm. Leaf. Philip. Bot. 3 (1910) 920; Merr. Sp. Blancoanae (1918) 217.

Kirganelia triandra Blanco Fl. Filip. (1837) 711, ed. 2 (1845) 492, ed. 3, 3 (1879) 115.

Phyllanthus triandrus Muell.-Arg. in Flora 48 (1865) 379, DC. Prodr. 15² (1866) 299; F.-Vill. Novis. App. (1880) 187; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 236.

Glochidion cleutherostylum Muell.-Arg. in Linnaea 32 (1863) 69.

Glochidion quinquestylum Elm. Leaf. Philip. Bot. 1 (1908) 303; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 89.

Luzon (Cagayan, Benguet, Zambales, Tayabas, Pampanga, Bataan, Rizal, Laguna, Camarines, Albay), Polillo, Mindoro, Biliran, Sibuyan, Guimaras, Negros. In thickets and secondary forests at low and medium altitudes. Endemic.

Local names: Bagná (Tag.); dampól (Tag.); hagud (P. Bis.); kásil (Ibn.); marabagét (Ilk.); marakabíbi (Ibn.); pañgo (Ibn.); shimei (Ig.).

GLOCHIDION TRICHOGYNUM Muell.-Arg. in Linnaea 32 (1863) 66; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 97; Elm. Leaf. Philip. Bot. 3 (1910) 921.

Phyllanthus trichogynus Muell.-Arg. in Flora 48 (1865) 380, DC. Prodr. 15² (1866) 301; F.-Vill. Novis. App. (1880) 187; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 238.

Luzon (Tayabas), Mindoro, Palawan, Leyte, Mindanao (Misamis, Lanao, Davao, Zamboanga). In forests at low and medium altitudes. Endemic.

Local names: Ananok (P. Bis.); tabañgan (Tagb.).

GLOCHIDION TRICHOPHORUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 484.

Luzon (Tayabas, Camarines), *B. S. 20821 Escritor, 23682, 33731, 33796 Ramos & Edaño*. In forests along small streams at low altitudes. Endemic.

GLOCHIDION UROPHYLLOIDES Elm. Leaf. Philip. Bot. 1 (1908) 300, 3 (1910) 920; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 90.

Glochidion fenicis Merr. in Philip. Journ. Sci. 3 (1908) Bot. 414.

Batan Islands, Luzon (Cagayan, Benguet, Isabela, Rizal), Mindanao (Davao), *Elmer 8677, 8758, 10569, B. S. 3696 Fénix, F. B. 11278 Klemme*. In forests at low and medium altitudes. Endemic.

Local names: Anam (Iv.); banak (Bag.); halakan (Ig.); kaloag (Tag.); kañgil (Neg.); sañgi (Ig.).

GLOCHIDION WEBERI C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 330.

Mindanao (Agusan, Butuan, Lanao, Davao), *Weber 1012, 1442, Elmer 18764, F. B. 25916 Alviar, 23140 Acuña, 28217 Elumir*. In forests along streams, up to 500 m altitude. Endemic.

Local name: Pasogonon (Mbo.).

GLOCHIDION WILLIAMSII C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 199, 4 (1909) Bot. 95.

Luzon (Bontoc, Benguet, Zambales, Bataan, Laguna), *Williams 953, Whitford 1172, 1327, Merrill Phil. Pl. 421, F. B. 18382 Alvarez, 17005*

Curran. In forested ravines and on ridges, altitude 1,000 to 1,500 m. Endemic.

Local names: Sangki (Ig.); tumuhan (Bon.).

DOUBTFUL SPECIES

GLOCHIDION ZEYLANICUM Juss. var. *MALAYANUM* J. J. Sm. in Koord. & Val. Bijdr. Boom. Java 12 (1910) 118.

The Philippine specimen referred here by Smith is probably *Glochidion leytnense* Elm.; see C. B. Robinson in Philip. Journ. Sci. 6 (1911) Bot. 331.

8. BREYNIA Forster

BREYNIA ACUMINATA Muell.-Arg. in DC. Prodr. 15² (1866) 442; F.-Vill. Novis. App. (1880) 189; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 238; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 76; C. B. Rob. op. cit. 4 (1909) Bot. 104. *Melanthesia acuminata* Muell.-Arg. in Linnaea 32 (1863) 74.

Luzon (Cagayan to Laguna, common), Mindoro, Samar, Leyte, Negros. In thickets and forests at low and medium altitudes, ascending to 1,200 m. Endemic.

Local names: Atiluag (Ting.); kalkaldia (Bon.); kármai (Ilk.); kármai-búgkau (Ilk.); marakarómai (Ilk.); mátang-úlang (Tag.); palin (Pang.); pertik (Bon.).

BREYNIA CERNUA (Poir.) Muell.-Arg. in DC. Prodr. 15² (1866) 439; F.-Vill. Novis. App. (1880) 189; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 238; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 75, 3 (1908) Bot. 415, Fl. Manila (1912) 286; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 105.

? *Phyllanthus cernuus* Poir. in Lam. Encycl. 5 (1804) 298.

Breynia cernua Muell.-Arg. var. *acutifolia* Muell.-Arg. in DC. Prodr. 15² (1866) 439.

Melanthesia cernua Muell.-Arg. var. *acutifolia* Muell.-Arg. in Linnaea 32 (1863) 74.

Batan Islands and northern Luzon to Palawan and Mindanao. Common in thickets at low and medium altitudes, ascending to 1,500 m. Java to the Moluccas, New Guinea, and Australia.

Local names: Añgayugayong (Iv.); antimtinid (Iv.); bagbagótot (Ilk.); chimí (Ig.); hinuyop (If.); kalamyásan (Tag.); karamanas (Tag.); má-táng-buiúd (Bik.); mátang-hípon (Tag.); mátang-úlang (Tag., Sbl.); nipin (Sul.); ñgagá (Ibn.); oyunñya (P. Bis.); sága (Tag.); saga-sága (Tag.); saga-ságang-káhoi (Tag.); sitsit (Ig.); tambuiúd (Bik.); saipantug (Sul.); songut-ólang (Bis.); tolog-tolog (P. Bis.); tintug (Sul.); tugtug (C. Bis.); turog (Buk.); tutulog (Sub.).

BREYNIA RHAMNOIDES (Retz.) Muell.-Arg. in DC. Prodr. 15² (1866) 440; F.-Vill. Novis. App. (1880) 189; Vidal Rev. Pl. Vasc. Filip. (1886) 238; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 104; Merr. op. cit. 5 (1910) 356, Fl. Manila (1912) 286; Elm. Leaf. Philip. Bot. 3 (1910) 906.

Phyllanthus rhamnoides Retz. Obs. 5 (1791) 30.

Habitat and Philippine distribution of the preceding species, and not always clearly distinguishable from it. India to China and Malaya.

Local names: Dagum (Sub.); gungumayi (Bon.); kabaong (Bon.); mátang-hípon (Tag.); mátan-sága (Kuy.); matang-úlang (Tag.); sala-mági (Bon.); santing (Sul.); sintug (Sul.); tañgisan-bágio (Bag.); torog-torog (P. Bis.); tulug-tulug (P. Bis.).

9. SAUROPUS Blume

SAUROPUS ANDROGYNUS (Linn.) Merr. in Philip. Bureau Forestry Bull.

1 (1903) 30; C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 72; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 217, f. 19.

Clutya androgyna Linn. Mant. 1 (1767) 30.

Sauropus albicans Blume Bijdr. (1825) 596; Miq. Fl. Ind. Bat. 1^a (1858-59) 366; Muell.-Arg. in DC. Prodr. 15² (1866) 241; F.-Vill. Novis. App. (1880) 187; Vidal Sinopsis Atlas (1883) 38, t. 82, f. E, Rev. Pl. Vasc. Filip. (1886) 235.

Sauropus macranthus F.-Vill. Novis. App. (1880) 187, non Hassk.

Luzon (Camarines), Mindoro, Samar, Leyte, *Ahern 132, 288, Merrill 3329, B. S. 24500, 24501, 17538 Ramos, Wenzel 105, 370, 1583*. In thickets at low altitudes. India to Sumatra, Java, and Borneo.

Local name: Binahían (Tag.).

SAUROPUS ROBINSONII Merr. in Philip. Journ. Sci. 7 (1912) Bot. 407;

Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 220.

Luzon (Benguet, Rizal), Mindanao (Lanao), *Elmer 5907, 6308, 6441, Clemens 939, B. S. 29782 Ramos & Edaño*. In thickets and forests, altitude 700 to 1,400 m. Endemic,

SAUROPUS SCANDENS C. B. Rob. in Philip. Journ. Sci. 4 (1909) Bot. 72;

Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 224.

Luzon (Amburayan, Nueva Ecija, Bataan), *Vanoverbergh 3794, F. B. 1934 Borden, B. S. 2649 Ramos & Edaño*. In forests and forested ravines at low altitudes, ascending to 300 m. Celebes.

10. CYCLOSTEMON Blume

CYCLOSTEMON BORDENII Merr. in Govt. Lab. Publ. (Philip.) 17 (1904)

26, Philip. Journ. Sci. 1 (1906) Suppl. 76.

Cyclostemon macrophyllus Vidal Sinopsis Atlas (1883) 38, t. 82, f. B, non Blume.

Cyclostemon merrittii Elm. Leaf. Philip. Bot. 3 (1910) 913.

Drypetes bordenii Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 244.

Babuyan Islands, Luzon (Cagayan, Apayao, Nueva Ecija, Nueva Vizcaya, Pampanga, Bataan, Tayabas, Camarines), Mindoro, Samar, Leyte, Panay, Mindanao (Surigao). In primary forests at low altitudes; common; allied to *C. macrophyllus* Blume. Endemic; a closely allied form in New Guinea.

Local names: Bagatáro (Bik.); butong-manók (Tag.); damol (S. L. Bis.) dila-díla (Tag.); gakákan (Ibn.); káaal (Neg.); malatámban (S. L. Bis.); palapnurgín (Ilk.); talimárun (Sbl.); talimórong (Pamp.); talúlong (Tag.); talumórun (Tag.).

CYCLOSTEMON BAWANII Merr. in Philip. Journ. Sci. 20 (1922) 397.

Luzon (Tayabas), *F. B. 25357, 25034 Bawan*. In forests at low altitudes. Endemic.

CYCLOSTEMON CUMINGII Baill. Étud. Gén. Euphorb. (1858) 485, *nomen nudum* (*cunningii*); Muell.-Arg. in DC. Prodr. 15² (1866) 485; F.-Vill. Novis. App. (1880) 189; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 238.

Drypetes cumingii Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 238, excl. syn. *C. littoralis* C. B. Rob. and *C. iwahigensis* Elm.

Samar, Mindanao (Misamis), *Cuming* 1695, *F. B.* 19548 *Klemme*. In forests near the seashore. Endemic.

Local name: Magataru (Lan.).

CYCLOSTEMON ELLIPSOIDEUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 369.

Drypetes ellipsoidea Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 250.

Luzon (Tayabas), Bancalan, Leyte, Samar, *Wenzel* 828, *B. S.* 24359, 24523 *Ramos*, *Warburg* 13094. In forests at low altitudes. Endemic.

Local names: Busag-busag (S. L. Bis.); kalugkugan (S. L. Bis.); putian (S. L. Bis.).

CYCLOSTEMON FALCATUS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 415.

Drypetes falcata Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 250.

Babuyan Islands (Camiguin), *B. S.* 4033 *Fénix*. Along the seashore. Endemic.

CYCLOSTEMON GITINGENSIS Elm. Leaf. Philip. Bot. 3 (1910) 912.

Drypetes gitingensis Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 250.

Sibuyan, *Elmer* 12317. In forests along streams, altitude about 300 m. Endemic.

Local name: Lakong (P. Bis.).

CYCLOSTEMON GLOBOSUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 478.

Drypetes globosa Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 247.

Luzon (Sorsogon), Cuyo, Mindoro, Masbate, Mindanao (Zamboanga), *B. S.* 21362 *Escritor*, *F. B.* 26157 *Miranda*, 2336 *Whitford* & *Hutchinson*, *Elmer* 16103, 16036. In thickets and forests at low altitudes. Endemic.

Local names: Bato-bató (Kuy.); matobató (P. Bis.).

CYCLOSTEMON GRANDIFOLIUS C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 197.

Drypetes grandifolia Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 245.

Panay, Mindanao, Sulu Archipelago, *F. B.* 6554 *Hutchinson*, 21881 *Villamil*, 11778 *Whitford*, 15232 *Almagro*, *B. S.* 15415 *Reillo*, 11824 *Robinson*. In primary forests at low altitudes. Endemic unless referable to the Malayan *C. macrophyllus* Blume.

Local names: Banáui (Sul., Mag.); magapisa (Mag.); taomo (Sul.).

CYCLOSTEMON IWAHIGENSIS Elm. Leaf. Philip. Bot. 4 (1911) 1278 p. p., excl. descr. fl., et No. 13175.

Palawan, Luzon (Sorsogon), *Elmer* 12695, 17290, 17282, 17347. In forests along streams, altitude about 150 m. Endemic, but to be compared with *C. minahassae* Koord.

Local name: Giraṅgan (Tagb.).

The first specimen cited in Elmer's original description is his 13175, which is *Taraktogenos heterophylla* (Blume) Van Slooten; the description of the flowers must be eliminated from his description. Under the circumstances I interpret the second specimen cited, 12696, as the type of the species, as it is a *Cyclostemon*. Reduced by Pax and K. Hoffmann to *Drypetes cumingii* Pax & Hoffm.

CYCLOSTEMON LITTORALIS C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 198.

Cyclostemon cumingii Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 76, non Baill.

Luzon (Cagayan, Ilocos Sur, Union, Batangas, Bataan, Laguna, Camarines, Sorsogon), Mindoro, Palawan, *Williams* 377, *Whitford* 1269, 1275, *Merrill Phil. Pl.* 1906, *Elmer* 17166, 15358, *F. B.* 28834 *Sulit*. In forests at low altitudes. Endemic.

Local names: Balikbikan (Tag.); bato-bató (Tagb.); butong-manók (Bik.); paṅgapasútín (Ibn.); pasaklák (Ilk.); putig (Sul.); tayum-táyum (Tag.); tombong-uák (Tagb.).

CYCLOSTEMON MAQUILINGENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 477.

Drypetes maquilingensis Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 240.

Luzon (Laguna), Mindanao (Butuan, Zamboanga, Davao), *Elmer* 17655, *F. B.* 20877 *Villamil*, 20585, 20772, 25349 *Miranda*, 25345 *Franco*, 26599 *Ceballos*. In primary forests, ascending to 700 m. Endemic.

Local names: Bagabolo (Bik.); marinau (Buk.); talon-manók (P. Bis.); tangísang-bágio (Tag.); tinaán-pantai (Tag.).

CYCLOSTEMON MEGACARPUS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 387.

Cyclostemon ramiflorus Merr. op. cit. 7 (1912) Bot. 387.

Cyclostemon incarnatus Elm. Leaflet. Philip. Bot. 7 (1915) 2639.

Drypetes megacarpa Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 248.

Drypetes ramiflora Pax & K. Hoffm. l. c.

Luzon (Tayabas, Laguna, Camarines), Mindoro, Samar, Panay, Leyte, Negros, Mindanao. In primary forests at low and medium altitudes. Borneo.

Local names: Balakúbung (Lan.); himlapbágio (S. L. Bis.); kalmol (Neg.); malagsak (Mbo.); margabúlo (Tag.).

CYCLOSTEMON MICROPHYLLUS Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 27, Philip. Journ. Sci. 1 (1906) Suppl. 76.

Drypetes microphylla Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 237.

Luzon (Cagayan to Sorsogon), Mindoro, Samar, Masbate, Panay, Mindanao. In primary forests at low and medium altitudes. Endemic.

Local names: Agolásin (Ibn.); apálong (Tag.); butong-manók (Tag.); daginíran (Neg.); dañgíran (Neg.); futoradinat (Klg.); gulasing (Ibn.); gulipápa (Ilk.); irani (Tag.); matobato (S. L. Bis.); pañgíránġing (Tag.); pañgírani (Tag.); pañgaránin (Tag.); salipag (Mbo.); talamórung (Tag.); talang-idong (Tag.); talimúrong (Tag.); talumórung (Tag.); tangnaránig (Tag.).

CYCLOSTEMON MINDANAENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 479.

Drypetes mindanaensis Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 248.

Mindanao (Davao, Zamboanga), *F. B. 12458 Tarrosa, 22752 Nave, Ahern 547, Elmer 11009*, some distributed as *Stemonurus*. In primary forests at low altitudes. Endemic.

Local names: Bakad (Bag.); banáui (Sul.); tingkál (Sul.).

CYCLOSTEMON MINDORENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 479.

Drypetes mindorensis Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 274.

Luzon (Nueva Ecija, Camarines), Mindoro, *B. S. 21278, 21311 Escritor, F. B. 25606 Tungol, 9733 Merritt, Ahern 27*. In forests at low altitudes. Endemic.

Local names: Bato-bató (Tag.); tináan-pantái (Tag.).

CYCLOSTEMON MONOSPERMUS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 76.

Drypetes monosperma Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 255.

Babuyan Islands, Luzon (Cagayan, Ilocos Norte, Nueva Ecija, Bulacan, Bataan, Rizal, Laguna, Camarines), Mindoro. In primary forests at low and medium altitudes, ascending to 1,300 m. Endemic.

Local names: Butig-bábui (Tag.); lumakau (Bik.).

CYCLOSTEMON OLIGOPHLEBIUM Merr. in Philip. Journ. Sci. 20 (1922) 398.

Mindoro, *F. B. 4036 Merritt, 12210 Rosenbluth*. In forests at low altitudes. Endemic.

Local name: Bato-bató (Tag.).

CYCLOSTEMON PALAWANENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 480.

Drypetes palawanensis Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 249.

Palawan, *Merrill 9451, F. B. 27980 Cenabre, Baldemor, & Aduiso*. In dry forests at low altitudes. Endemic.

CYCLOSTEMON SIBUYANENSIS Elm. Leaf. Philip. Bot. 3 (1910) 914.

Drypetes sibuyanensis Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 247.

Sibuyan, *Elmer 12275*. In forests, altitude about 225 m. Endemic.

Local name: Bagbog (P. Bis.).

10a. **HEMICYCLIA** Wight and Arnott

HEMICYCLIA OVALIS J. J. Sm. in Meded Dept. Landbouw 10 (1910) 221 (Koord. & Val. Bijdr. Boomsoort. Java 12: 221).

Cyclostemon calcicola Merr. in Philip. Journ. Sci. 9 (1914) Bot. 478.

Drypetes calcicola Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 266.

Mindoro, Palawan, Negros, Malamaui, *Merrill 9430, 9427, Phil. Pl. 2100, F. B. 24182 Medina, 20697 Tamesis, 23412 Contreras, 25577 Hirro*. In thickets and forests at low altitudes on limestone formations. Java.

Local names: Butígan (C. Bis.); pugúran (P. Bis.).

J. J. Smith describes the Javan form as having glabrous fruits; my Javan specimens, *Backer 27839, 28136*, have puberulent fruits. I can see no reason for distinguishing the Philippine form.

HEMICYCLIA SUBCRENATA (Merr.) comb. nov.

Cyclostemon subcrenatus Merr. in Philip. Journ. Sci. 7 (1912) Bot. 388.

Drypetes subcrenata Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 274.

Luzon (Batangas, Camarines, Albay), Bancalan, *F. B. 21567 Tamesis, 10588 Curran, 897 Van Wickle, Weber*. In forests at low altitudes. Endemic.

11. **APOROSA** Blume

APOROSA ACUMINATISSIMA Merr. in Philip. Journ. Sci. 16 (1920) 546.

Luzon (Laguna), *F. B. 26185 Amarillas*. In primary forests, altitude about 450 m. Endemic.

APOROSA ALVAREZII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 470.

Luzon (Laguna, Camarines), Samar, *F. B. 21245 Alvarez, 26793 Mabella, B. S. 20567, 24218, 24281 Ramos*. In primary forests at low altitudes. Endemic.

APOROSA AURITA (Tul.) Miq. Fl. Ind. Bat. 1¹ (1858-59) 431; Baill. Étud. Gén. Euphorb. (1858) 645; Muell.-Arg. in DC. Prodr. 15² (1866) 474; F.-Vill. Novis. App. (1880) 190; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 100.

Scepa aurita Tul. in Ann. Sci. Nat. Bot. III 15 (1851) 254.

Aporosa microcalyx Hassk. in Bull. Soc. Bot. France 6 (1859) 714; Muell.-Arg. in DC. Prodr. 15² (1866) 471; F.-Vill. Novis. App. (1880) 190; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 239; C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 208; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 101.

Tetractinostigma microcalyx Hassk. in Flora 40 (1857) 533, Hort. Bogor. Descr. (1858) 55.

Aporosa cumingiana Baill. Étud. Gén. Euphorb. (1858) 645, *nomen nudum*.

Luzon (Isabela), Polillo, Samar, Leyte, *Cuming 1724, B. S. 8055 Ramos, 9074, 9306 Robinson, 10275 McGregor, Wenzel 1387, Merrill Phil. Pl. 1681*. In forests at low altitudes. Andaman Islands, Malay Peninsula. Sumatra, Bangka, Borneo, Java, Celebes.

APOROSA BANAHAENSIS (Elm.) comb. nov.

Baccaurea banahaensis Elm. Leaf. Philip. Bot. 4 (1912) 1475; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 70.

Aporosa similis Merr. in Philip. Journ. Sci. 9 (1914) Bot. 472; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 92.

Aporosa agusanensis Elm. Leaf. Philip. Bot. 7 (1915) 2636.

Luzon (Tayabas, Laguna, Camarines), Mindoro, Leyte, Negros, Panay, Mindanao (Agusan), *Elmer* 9106, 13415, *B. S.* 29210, 28728, 30860, 31010, 31248 *Ramos & Edaño*, 13519, 20514, 15112, 41076, 40857 *Ramos*, *F. B.* 7279, 7254 *Everett*, *Wenzel* 919, 776, 716, 687. In primary forests at low altitudes; closely allied to *A. frutescens* Blume. Endemic.

Local names: Agúsip (Bik.); hagúsip (Bik.); hauai (Mbo.).

APOROSA BASILANENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 471;

Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 94.

Basilan, *B. S.* 16168 *Reillo*. In forests at low altitudes. Endemic.

APOROSA ELLIPTIFOLIA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 472.

Palawan, *Merrill* 9609. On forested slopes at low altitudes. Endemic.

APOROSA LEYTENSIS Merr. in Philip. Journ. Sci. 9 (1914) 368.

Leyte, Biliran, *Wenzel* 587, 614, *B. S.* 18641 *McGregor*. In forests, altitude 500 to 600 m. Endemic.

APOROSA LUNATA (Miq.) Kurz in Journ. Asiat. Soc. Bengal 42² (1873)

239; Pax & Hoffm. in Engl. Pflanzenreich 81 (1922) 82, var.

STIPULOSA (Merr.) comb. nov.

Aporosa stipulosa Merr. in Philip. Journ. Sci. 16 (1920) 547.

Aporosa lunata Kurz. var. *philippinensis* Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 82.

Biliran, Leyte, Mindanao (Lanao, Agusan), *Clemens* 968, *Elmer* 13474, 14042, *Wenzel* 637, *B. S.* 18642 *McGregor*, *F. B.* 22029 *Sherfessce*, *Cenabre*, & *Cortes*. In primary forests at low altitudes, ascending to 800 m; the variety endemic, the species in the Malay Peninsula, Sumatra, Java, and Borneo.

Local names: Manlobadon (Mbo.); sungung (Mbo.).

APOROSA SPHAERIDOPHORA Merr. in Philip. Journ. Sci. 1 (1906) Suppl.

76, 11 (1916) Bot. 283; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 86.

Aporosa campanulata J. J. Sm. in Ic. Bogor. 3 (1907) 71, t. 229, Meded. Dept. Landbouw 10 (1910) 237.

Luzon (Cagayan, Benguet, Zambales, Bataan, Tayabas, Laguna, Sorsogon), Palawan, Samar, Leyte, Negros, Panay, Mindanao (Lanao), incl. *Elmer* 17237 as *A. bulusanensis* Elm., 15563 as *A. rotundifolia* Elm., and 15654 as *A. sorsogonensis* Elm. In primary forests at medium altitudes, ascending to 1,600 m. Sumatra, Java, Moluccas.

Local names: Apnu (Neg.); kaliuas (Tag.).

APOROSA SYMPLOCIFOLIA Merr. in Philip. Journ. Sci. 1 (1906) Suppl.

77 (*symplocosifolia*); Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 88.

Luzon (Cagayan, Ilocos Norte, Pangasinan, Zambales, Bataan, Rizal, Albay, Sorsogon), Mindoro. Common in primary forests at low and medium altitudes. Endemic.

Local names: Alásan (Sbl.); bakuringan (Neg.); bigloi (Tag.); bohukan (Bik.); kandong (Pang.); kaping-gúbat (Ilk.); kuya-káya (Tag.); lasgas (Bik.); pamugnayen (Pang.); putían (Pang.); siriki (Tag.).

EXCLUDED SPECIES

APOROSA LATIFOLIA Thwaites; F.-Vill. Novis. App. (1880) 190.

APOROSA MACROPHYLLA Muell.-Arg.; F.-Vill. l. c.

APOROSA VILLOSA Baill.; F.-Vill. l. c.

11a. RICHERIELLA Pax & K. Hoffmann

RICHERIELLA GRACILIS (Merr.) Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 30.

Baccaurea gracilis Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 203.

Palawan, Bancalan, *B. S. 218, 258 Bermejos, F. B. 24037 Natividad, 3828, 4123, 4137 Curran, Weber*. In flat forests at low altitudes. A monotypic endemic genus.

12. BACCAUREA Loureiro

BACCAUREA GLABRIFLORA Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 59.

Baccaurea lanceolata Merr. in Philip. Journ. Sci. 4 (1909) Bot. 277, non Muell.-Arg.

Palawan, *Merrill 853*. In forests at low altitudes. Endemic.

BACCAUREA LANCEOLATA (Miq.) Muell.-Arg. in DC. Prodr. 15² (1866) 457; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 60.

Hedycarpus lanceolatus Miq. Fl. Ind. Bat. 1² (1858-59) 359.

Adenocrepis lanceolata Muell.-Arg. in Linnaea 32 (1863) 82.

Jolo, *Link 212*. Probably planted for its edible fruits. Malay Peninsula, Sumatra, Java, Borneo.

Local name: Limpahung (Sul.).

BACCAUREA ODORATISSIMA Elm. Leaf. Philip. Bot. 4 (1911) 1276; Pax & Hoffm. in Engl. Pflanzenreich 81 (1922) 59.

Palawan, *Elmer 12864, 13160*. In forests, altitude about 225 m. Endemic.

BACCAUREA PHILIPPINENSIS (Merr.) Merr. in Philip. Journ. Sci. 10 (1915) Bot. 275; Pax & Hoffm. in Engl. Pflanzenreich 81 (1922) 68.

Everettiodendron philippinense Merr. op. cit. 4 (1909) Bot. 279; Elm. Leaf. Philip. Bot. 3 (1910) 916.

Luzon (Cagayan, Ilocos Norte, Pangasinan, Zambales, Tayabas, Laguna, Camarines), Biliran, Leyte, Negros, Mindanao (Surigao). In forests at low altitudes; allied to *Baccaurea bracteata* Muell.-Arg. Endemic.

Local names: Balóyboi (Sbl.); ebeo (Pang.); kalunḡalon (S. L. Bis.); kuya-kuya (S. L. Bis.); loslospit (Pang.); mangkáu (Bik.); marikau-napulá (Tag.).

BACCAUREA TETRANDRA (Baill.) Muell.-Arg. in DC. Prodr. 15² (1866) 465; F.-Vill. Novis. App. (1880) 190; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 239; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 30, Philip. Journ. Sci. 1 (1906) Suppl. 77; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 49. *Adenocrepis tetrandra* Baill. Étud. Gen. Euphorb. (1858) 601, *nomen nudum*, *Adansonia* 4 (1863) 135.

Baccaurea terminalifolia Elm. Leaf. Philip. Bot. 4 (1911) 1277.

Luzon (Cagayan, Apayao, Zambales, Bataan, Tayabas, Sorsogon), *Elmer* 12704, 13089, 15580, 15589, 15821 as *B. bakeri* Elm., Samar, Leyte, Negros, Panay, Mindanao (Surigao, Davao, Zamboanga), Palawan. Common in forests at low and medium altitudes. Endemic.

Local names: Amitan (Neg.); arumbidon (Tagb.); bigtey (Ilk.); dilak (Tag.); gilak (Tag.); gililak (Tag.); giraṅgan (Tagb.); malatayótes-lain (S. L. Bis.); palpalan (C. Bis.); papadásen (Ibn.).

EXCLUDED SPECIES

BACCAUREA SUMATRANA Muell.-Arg.; F.-Vill. Novis. App. (1880) 190.

13. ANTIDESMA Burman

ANTIDESMA AGUSANENSE Elm. Leaf. Philip. Bot. 7 (1915) 2632; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 151.

Luzon (Sorsogon), Mindanao (Agusan, Surigao), Siargao, *Elmer* 13549, 14865, 15950, 15881, *B. S.* 34928, 34927, 34371, 34694 *Ramos & Pascasio*. In thickets and forests at low and medium altitudes. Endemic.

Local name: Mataindo (Mbo.).

ANTIDESMA ANGUSTIFOLIUM (Merr.) Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 165.

Antidesma pentandrum Merr. var. *angustifolium* Merr. in Philip. Journ. Sci. 9 (1914) Bot. 464.

Luzon (Benguet, Nueva Vizcaya), *Elmer* 6320, 6327, *Williams* 940, *B. S.* 14400 *McGregor*. In thickets at medium altitudes. Endemic.

ANTIDESMA BUNIUS (Linn.) Spreng. Syst. 1 (1825) 826; Tul. in Ann. Sci. Nat. III 15 (1851) 186; Presl Epim. (1851) 234; Miq. Fl. Ind. Bat. 1² (1858-59) 423; Muell.-Arg. in DC. Prodr. 15² (1866) 262; F.-Vill. Novis. App. (1880) 191; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 239; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 77, Fl. Manila (1912) 287, Sp. Blancoanae (1918) 218; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 160.

Stilago bunius Linn. Mant. 1 (1767) 122; Blanco Fl. Filip. (1837) 782, ed. 2 (1845) 539, ed. 3, 3 (1879) 189, t. 361.

Antidesma ciliatum Presl Epim. (1851) 234.

Antidesma cordifolium Presl l. c.

Antidesma bunius Spreng. var. *cordifolium* Muell.-Arg. in DC. Prodr. 15² (1866) 262.

Sapium crassifolium Elm. Leaf. Philip. Bot. 2 (1908) 485.

Antidesma crassifolium Merr. in Philip. Journ. Sci. 7 (1912) Bot. 383; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 139.

Northern Luzon to Mindanao, common in thickets, etc., in the vicinity of towns and settlements, occasional in forests.

Local names: Bignai (Tag., Sbl., Bik., Mang.); bignai-kalabáu (Tag.); bugnái (Ilk., Bon., Ibn., P. Bis., C. Bis.); búgnei (Bon., If.); búndei (Ibn.); dokodoko (Bag.); isip (Pamp.); mutagtamanuk (Bag.); oyhip (Sbl.); pag-iñgá (Ibn.); vunnai (Ibn.).

ANTIDESMA CATANDUANENSE Merr. in Philip. Journ. Sci. 16 (1920) 549.

Catanduanes, *B. S. 30515 Ramos*. In forests along streams at low or medium altitudes. Endemic.

ANTIDESMA CLEMENTIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 467; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 119.

Mindanao (Lanao), *Clemens 339, 384*. In forested ravines along streams, altitude about 700 m. Endemic.

ANTIDESMA CORDATO-STIPULACEUM Merr. in Philip. Journ. Sci. 4 (1909) Bot. 275.

Mindoro, *Merrill 1807, McGregor 179, 311, F. B. 6794, 6841 Merritt, B. S. 39605, 39423, 41060, 41086, 40899 Ramos*. In humid primary forests at low altitudes. Endemic.

Pax and Hoffmann reduce this to *Antidesma stipulare* Blume, from which species it is apparently sufficiently distinct.

Var. LANCIFOLIUM var. nov.

A typo differt foliis lanceolatis, 12 ad 18 cm longis, 2 ad 3.5 cm latis.

Mindoro, *B. S. 40732, 40733 Ramos & Edaña*. In forests, altitude about 700 m. Endemic.

ANTIDESMA CUMINGII Muell.-Arg. in DC. Prodr. 15² (1866) 249; F.-Vill. Novis. App. (1880) 190; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 240; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 416; Elm. Leaf. Philip. Bot. 3 (1910) 905; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 120.

Antidesma membranefolium Elm. Leaf. Philip. Bot. 1 (1908) 313.

Babuyan Islands, Luzon (Cagayan, Apayao, Isabela, Tayabas, Laguna, Camarines), Catanduanes, Palawan, Samar, Leyte, Negros, Panay, Mindanao, Basilan. In forests at low and medium altitudes. Endemic.

Local names: Bugnai-to-kálaw (Ibn.); buñgoi (Bag.); iñgalao (Klg.); liputing-gúbat (Tag.); magbúgnai (Klg.); magotambís (C. Bis.); marabutau (Neg.); ñgalao (Ap.); pamution (C. Bis.); tupuk (Mag.).

ANTIDESMA CURRANII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 466; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 129.

Luzon (Benguet), *F. B. 5087 Curran, Baker 4105*. In thickets, stream depressions, altitude about 1,400 m. Endemic.

ANTIDESMA DIGITALIFORME Tul. in Ann. Sci. Nat. III 15 (1851) 191; Miq. Fl. Ind. Bat. 1² (1858-59) 423; Muell.-Arg. in DC. Prodr. 15² (1866) 262; F.-Vill. Novis. App. (1880) 191; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 151.

Antidesma lucidum Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 78; Elm. Leaf. Philip. Bot. 3 (1910) 905; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 164.

Luzon (Ilocos Norte, Benguet, Bontoc, Bataan), Callery, Merrill *Phil. Pl.* 893, as *A. japonicum*, Williams 974, 1139, 1140, 1141, Loher 4651, F. B. 2642, 2775 Meyer, B. S. 37886 Ramos & Edaño, Elmer 7005. In forests and thickets, altitude 700 to 1,800 m. Endemic.

ANTIDESMA FUSICARPUM Elm. Leaf. Philip. Bot. 8 (1919) 3080.

Luzon (Laguna), Elmer 18083. In forested ravines, altitude about 300 m. Endemic.

ANTIDESMA GHAESEMBILLA Gaertn. Fruct. 1 (1788) 189, *t.* 39; Tul. in Ann. Sci. Nat. III 15 (1851) 228; Miq. Fl. Ind. Bat. 1² (1858-59) 427; Muell.-Arg. in DC. Prodr. 15² (1866) 251; F.-Vill. Novis. App. (1880) 190; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 240; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 76; Philip. Journ. Sci. 1 (1906) Suppl. 78, Fl. Manila (1912) 287, Sp. Blancoanae (1918) 218; Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t.* 26; Elm. Leaf. Philip. Bot. 4 (1911) 1271; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 155.

Cansjera grossularioides Blanco Fl. Filip. (1837) 73, ed. 2 (1845) 53, ed. 3, 1 (1877) 99, *t.* 26; Meissn. in DC. Prodr. 14 (1857) 519; Valetton Crit. Overzicht Olac. (1886) 160.

Antidesma paniculatum Roxb. Fl. Ind. ed. 2, 3 (1832) 770; Presl Epim. (1851) 232.

Antidesma pubescens Roxb. Pl. Coromandel 2 (1798) 35, *t.* 167; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 424.

Throughout the Philippines at low and medium altitudes, a common and characteristic tree of open cogonales (grasslands) at low and medium altitudes. India to tropical Africa, southern China, through Malaya to tropical Australia.

Local names: Aniam (Tagb.); arosép (Ilk.); arosíp (Ilk.); arsép (Ilk.); arusi' (Ibn.); arusi'p (Ilk.); arúsit (Ig.); ayúsip (Bon.); bananóyo (Sbl.); baniyúyo (Tag.); banumyo (Sbl.); baroñgasi (Mang.); bayet (Tag.); bignayóko (Tag.); binaú-u (Tag.); binayóyo (Tag.); binayúyo (Sbl.); binayúyu (Tag.); dampol (Kuy.); dañgul (Bag.); inyam (P. Bis.); kabogbog (Tag.); kiuyan (P. Bis., Tag.); limyang (Tag.); minul (Sul.); nignul (Mag.); ninol (Mag.); ninul (Mag.); parusit (Ting.); pinang (Tag.); tinuyung (Tag.); tubo-túbo (Bik.).

Var. *VESTITUM* (Presl) Muell.-Arg. in DC. Prodr. 15² (1866) 251; Vidal Phan. Cuming. Philip. (1885) 142.

Antidesma vestitum Presl Epim. (1851) 232.

Luzon (Pangasinan), Cuming 986. This variety endemic.

ANTIDESMA ILOCANUM Merr. in Philip. Journ. Sci. 16 (1920) 549.

Luzon (Ilocos Norte), B. S. 32998 Ramos. In secondary forests at low altitudes. Endemic.

ANTIDESMA IMPRESSINERVE Merr. in Philip. Journ. Sci. 16 (1920) 548.

Panay, B. S. 31409, 31268, 31020 Ramos & Edaño. In forests along small streams. Endemic.

ANTIDESMA LEPTOCLADUM Tul. in Ann. Sci. Nat. III 15 (1851) 199; Miq. Fl. Ind. Bat. 1² (1858-59) 424; Muell.-Arg. in DC. Prodr.

15² (1866) 253; F.-Vill. Novis. App. (1880) 190; Vidal Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 239; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 277; Elm. Leaf. Philip. Bot. 3 (1910) 906, 4 (1911) 1271.

Antidesma alexiterium Presl Epim. (1851) 234, non Linn.

Luzon (Tayabas, Laguna) Mindoro, Panay, Mindanao, *Cuming 1513*, *B. S. 19410 Ramos, 23191 McGregor, F. B. 5403, 5513 Merritt, 26655 Rola*. In forests at low altitudes. Malay Peninsula.

Local names: Kinuum (Tag.); malasúka (Bik.); timbabási (Tag.); ugisip (Buk.).

This is reduced by Pax and Hoffmann to the Javan *Antidesma montanum* Blume.

ANTIDESMA LUZONICUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 464; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 152.

Luzon (Tayabas, Camarines, Luzon), Samar, Leyte, Bucas Grande, *Merrill Phil. Pl. 1555, B. S. 26561 Ramos & Edaño, 26636, 24541 Ramos, Wenzel 1347, Elmer 15464, 15601*. In forests at low and medium altitudes. Endemic.

Local name: Tulanan (S. L. Bis.).

ANTIDESMA MACGREGORII C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 207; Pax & Hoffm. in Engl. Pflanzenreich 81 (1922) 138.

Luzon (Cagayan, Ilocos Norte, Tayabas, Camarines), Polillo, Catanduanes, Samar, *B. S. 10280, 10583, 10584 McGregor, 7397, 24504, 30542, 33023 Ramos, F. B. 17763 Currah*. In forests at low altitudes. Endemic.

Local names: Bignai (Ibn.); bignay-gubat (S. L. Bis.).

ANTIDESMA MEGALOPHYLLUM Merr. in Philip. Journ. Sci. 16 (1920) 551.

Babuyan Islands (Calayan), *F. B. 26642 Velasco*. In forests at low altitudes. Endemic.

ANTIDESMA MICROCARPUM Elm. Leaf. Philip. Bot. 2 (1908) 487.

Antidesma maesoides Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 164.

Luzon (Sorsogon), Negros, Samar, Leyte, Mindanao, *Elmer 9668, 17264, 16940, Clemens 63, Wenzel 823, Warburg 14355, B. S. 15251, 15335, 24220 Ramos, 15731 Fénix*. In forests at low altitudes, ascending to 800 m. Endemic.

Local names: Baruan (Bag.); tagabinlod (C. Bis.).

Pax and Hoffmann discuss this species as probably being the same as *A. pentandrum* Merr., from which it is remote; it is the form described by these authors as *A. maesoides*.

ANTIDESMA MINDANAENSE Merr. in Philip. Journ. Sci. 7 (1912) Bot. 383; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 137.

Luzon (Apayao), Balabac, Mindanao (Lanao, Zamboanga, Cotabato), Basilan, *Williams 2117, B. S. 28041 Fénix, Merrill 5376, 8274, F. B. 11882 Miranda, 6115 Hutchinson, B. S. 15455, 15438 Reillo, 36965 Ramos & Edaño*. In forests at low altitudes, ascending to 800 m. Endemic.

Local names: Bínai (Sub.); bínai-gutong (Sub.).

ANTIDESMA NITIDUM Tul. in Ann. Sci. Nat. III 15 (1851) 193; Miq. Fl. Ind. Bat. 1² (1858-59) 423.

Antidesma heterophyllum Presl Epim. (1851) 234, non Blume.

Antidesma leptocladum Tul. var. *nitidum* Muell.-Arg. in DC. Prodr. 15² (1866) 253; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 240.

Luzon (Nueva Vizcaya, Tayabas, Camarines), Mindoro, Leyte, Negros, Cebu, Bohol, Mindanao, *Cuming 1151, 1820, F. B. 11444 Merritt, Merrill 5717, Wenzel 107, 115, 116, 319, 555, Elmer 7371, Weber 1492*. In thickets and forests at low and medium altitudes. Endemic.

This is reduced by Pax and Hoffmann to *Antidesma montanum* Blume.

ANTIDESMA OBLIQUINERVIUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 466; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 137.

Palawan, *Merrill 9336, 9295, 9294, F. B. 21491 Fernandez, B. S. 789 Foxworthy*. In primary forests at low altitudes. Endemic.

ANTIDESMA PALAWANENSE Merr. in Philip. Journ. Sci. 9 (1914) Bot. 467; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 131.

Palawan, Bancalan, *B. S. 749, 808 Foxworthy, Elmer 12808*. In forests at low altitudes. Borneo, fide Pax and Hoffmann.

ANTIDESMA PENTANDRUM (Blanco) Merr. in Philip. Journ. Sci. 9 (1914) Bot. 462, Sp. Blancoanae (1918) 219.

Cansjera pentandra Blanco Fl. Filip. (1837) 73, ed. 2 (1845) 53, ed. 3, 1 (1877) 98; Meissn. in DC. Prodr. 14 (1857) 519; Valeon Crit. Overzicht Olac. (1886) 160 (excl. syn. Blume).

Cansjera rheedii Blanco op. cit. 73, 52, 98, t. 25, non aliorum.

Antidesma rostratum Tul. in Ann. Sci. Nat. III 15 (1851) 218; Miq. Fl. Ind. Bat. 1² (1858-59) 426; Muell.-Arg. in DC. Prodr. 15² (1866) 257; F.-Vill. Novis. App. (1880) 191; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 240, Sinopsis Atlas (1883) 38, t. 82, f. G; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 125.

Antidesma salicifolium Presl Epim. (1851) 233.

Antidesma leptocladum Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 78, Fl. Manila (1912) 288, non Tul.

Babuyan Islands, Luzon (Cagayan, Ilocos Norte, Union, Benguet, Pangasinan, Zambales, Bulacan, Rizal, Bataan, Cavite, Laguna, Tayabas, Sorsogon, Albay), common in thickets at low and medium altitudes, ascending to 1,800 m. Formosa.

Local names: Alaññon (Bik.); balanei-na-manók (Pang.); bígnai-pano (Tag.); bígnai-pógo (Tag.); binayúyo-matsing (Tag.); bolinog (Sbl.); búgnai (Ibn., Ilk.); búnai (Neg.); malabígnai (Tag., Sbl.); malabinayúyo (Pamp.); pakagli (Tag.); saláigma (Ig.); talan (Ibn.); unát (Ilk.).

Var. **LOBBIANUM** (Muell.-Arg.) Merr. in Philip. Journ. Sci. 9 (1914) Bot. 463.

Antidesma rostratum Tul. var. *lobbianum* Tul. in Ann. Sci. Nat. III 15 (1851) 219.

Antidesma lobbianum Muell.-Arg. in DC. Prodr. 15² (1866) 254; Rolfe in Journ. Bot. 23 (1885) 215; Vidal Rev. Pl. Vasc. Filip. (1886) 240.

Luzon (Rizal, Manila), *Lobb 460, Loher 4656, Merrill 3477, Phil. Pl. 1510*. Lobb's specimen was erroneously localized as Javan.

Var. **BARBATUM** (Presl) Merr. in Philip. Journ. Sci. 9 (1914) Bot. 463.

Antidesma barbatum Presl Epim. (1851) 233.

Antidesma rostratum Tul. var. *barbatum* Muell.-Arg. in DC. Prodr. 15² (1866) 257; Vidal Phan. Cuming. Philip. (1885) 143.

Batan Islands, Luzon (Cagayan, Ilocos Norte, Isabela, Zambales, Tayabas, Albay), *Cuming 1246, 966, B. S. 3996, 3656 Fénix, 5041, 8079 Ramos, F. B. 16617 Curran, 15500 Bernardo, 11291 Klemme, Merrill 2975, 2943*. Formosa, *Henry 1885, 1144*. In thickets at low and medium altitudes.

ANTIDESMA PLEURICUM Tul. in Ann. Sci. Nat. III 15 (1851) 213; Miq.

Fl. Ind. Bat. 1² (1858-59) 426; Muell.-Arg. in DC. Prodr. 15² (1866) 255; F.-Vill. Novis. App. (1880) 191; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 240; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 148.

Antidesma zeylanicum Presl Epim. (1851) 234, non Lam.

Antidesma obliquicarpum Elm. Leaf. Philip. Bot. 7 (1915) 2655.

Antidesma tenuifolium Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 137.

Luzon (Cagayan, Ilocos Norte, Bataan, Laguna, Tayabas, Camarines, Sorsogon, Albay), Samar, Burias, Ticao, Siargao, Mindanao. In forests at low and medium altitudes. Endemic.

Local names: Balában (Ibn.); binólo (S. L. Bis.); búrnai-kalabáu (Tag.); hotot (Mbo.); huas (P. Bis.); karugkúg (Bik.); magalimukun (Mand.); malabignai (Tag.); tagotónġan (Bik.); tognating (C. Bis.).

ANTIDESMA RAMOSII Merr. in Philip. Journ. Sci. 9 (1914) Bot. 468.

Antidesma pentandrum Merr. var. *ramosii* Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 126.

Luzon (Rizal), *B. S. 1002, 1372 Ramos*. In forests at medium altitudes. Endemic.

Local name: Malabignai (Tag.).

ANTIDESMA SAMARENSE Merr. in Philip. Journ. Sci. 9 (1914) Bot. 469; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 160.

Antidesma urdanetense Elm. Leaf. Philip. Bot. 7 (1915) 2635.

Luzon (Camarines), Catanduanes, Samar, Leyte, Mindanao (Surigao, Agusan), *Merrill Phil. Pl. 1665, B. S. 30533 Ramos, 34083 Ramos & Pascasio, F. B. 25525 Cenabre, Wenzel 1707, Elmer 13971*. In forests at low altitudes. Endemic.

Local names: Malabugnái (Bik.); malaigan (Mbo.).

Antidesma urdanetense Elm. is placed by Pax and Hoffmann as a synonym of *A. cumingii* Muell.-Arg.

ANTIDESMA SANTOSII Merr. in Philip. Journ. Sci. 16 (1920) 550.

Luzon (Laguna), *F. B. 26300 Santos*. In forests along streams, altitude about 600 m. Endemic.

ANTIDESMA SPICATUM Blanco Fl. Filip. (1837) 794; Merr. Sp. Blancoanae (1918) 219.

Antidesma alixiteria Blanco op. cit. ed. 2 (1845) 547, ed. 3, 3 (1879) 202, non Linn.

Antidesma edule Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 26, Philip. Journ. Sci. 1 (1906) Suppl. 77; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 114.

Antidesma montanum Presl Epim. (1851) 233; F.-Vill. Novis. App. (1880) 191; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 240; Tul. in Ann. Sci. Nat. III 15 (1851) 221 (quoad Philip.); Miq. Fl. Ind. Bat. 1² (1858-59) 427 (quoad Philip.); Muell.-Arg. in DC. Prodr. 15² (1866) 264 (quoad Philip.), non Blume.

Luzon (Benguet, Zambales, Bataan, Nueva Ecija, Pampanga, Rizal), Mindoro. Common in primary forests at low altitudes. Endemic.

Local names: Bagnas (Tag.); kalamantau (Tag.); kuriuét (Ilk.); laying (Tag.); maraginag (Neg.); naghubo (Tag.); tanigi (Tag., Pamp.).

ANTIDESMA SUBCORDATUM Merr. in Philip. Journ. Sci. 4 (1909) Bot. 275; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 156.

Luzon (Rizal), Merrill 2813, Phil. Pl. 379, B. S. 1114, 4664, 2136 Ramos, 29516 Ramos & Edaña, F. B. 3160 Ahern's collector. In forests at medium altitudes. Endemic.

Var. **GLABRESCENS** Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 157.

Luzon (Ilocos Norte, Pangasinan, Bulacan, Nueva Ecija, Cavite), Mindoro, Palawan, Masbate, F. B. 4492, 7213, 7166, 8453, 7213, 13212 Curran, 8371 Curran & Merritt, Merrill 2860, 3051. In dry forested slopes. Endemic.

Local names: Banóyo (Tag.); makabálo (Ilk.); malabinayóyo (Tag.); tignoi (Tag.).

ANTIDESMA SUBOLIVACEUM Elm. Leaf. Philip. Bot. 4 (1911) 1272; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 113.

Palawan, Elmer 12883. In damp forests, altitude about 225 m. Endemic.

EXCLUDED SPECIES

ANTIDESMA FRUTESCENS Jack; F.-Vill. Novis. App. (1880) 190.

ANTIDESMA MORITZII Muell.-Arg.; Stapf in Trans. Linn. Soc. Bot. 4 (1894) 225.

The Philippine record for this species was probably based on Hooker's reduction of *Antidesma leptocladum* Tul. to *A. moritzii* Muell.-Arg.

14. BISCHOFIA Blume

BISCHOFIA JAVANICA Blume Bijdr. (1826) 1168; Muell.-Arg. in DC. Prodr. 15² (1866) 478; Miq. Fl. Ind. Bat. 1² (1858-59) 363; F.-Vill. Novis. App. (1880) 189; Vidal Sinopsis Atlas (1883) 38, t. 82, f. A, Phan. Cuming. Philip. (1885) 142, Rev. Pl. Vasc. Filip. (1886) 239; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 356, Fl. Manila (1912) 288; Pax & K. Hoffm. in Engl. Pflanzenreich 81 (1922) 313, f. 26.

Andrachne trifoliata Roxb. Hort. Beng. (1814) 70, *nomen nudum*, Fl. Ind. ed. 2, 3 (1832) 728.

Stylodiscus trifoliatus Benn. Pl. Jav. Rar. (1840) 133, t. 39.

Bischofia oblongifolia Decne. in Jacq. Voy. 4 (1844) 152, t. 154.

Bischofia toui Decne. op. cit. 153; Walp. Ann. 1 (1848) 159.

Bischofia cumingiana Decne. l. c.; Walp. l. c.

Bischofia javanica Blume var. *toui* Muell.-Arg. in DC. Prodr. 15^a (1866) 478.

Bischofia trifoliata Hook. f. Ic. II 5 (1852) t. 844; Merr. in Philip. Journ. Sci. 1 (1916) Suppl. 78.

Northern Luzon (Cagayan) to Palawan and Mindanao. Common in forests along streams at low and medium altitudes, ascending to 1,500 m. India to central southern China and Formosa, through Malaya to tropical Australia and Polynesia.

Local names: Apálang (Tag.); aiúni (Tag.); bagna (Tag.); dampol (Tag.); bangu (Mand.); duág (Ibn.); duég (Ilk.); kanárem (Ilk.); kitakitá (Ilk.); maladisai (Mbo.); mandos (Mbo.); taua (Neg.); toa (Tag.); to-é (Tag.); toób (Tag.); toóg (Bik., Tag., P. Bis.); took (Tag., Bis.); toogan (Ibn.); tua (Tag.); tuái (Tag.); tuél (Ig., Ting., Ig.); tuol (Ig., If.); túi (Tag.); túiris (Tag.); tuit (Bon.); tuue (Ig.).

15. CLEISTANTHUS Hooker f.

CLEISTANTHUS ANGUSTIFOLIUS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 386; Jabl. in Engl. Pflanzenreich 65 (1915) 52.

Luzon (Cagayan), Bucas Grande, *Weber 1562, B. S. 13927 Ramos, 35187 Ramos & Pascasio, F. B. 17796 Curran*. On forested ridges and slopes at low altitudes. Endemic.

CLEISTANTHUS APICULATUS C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 189; Jabl. in Engl. Pflanzenreich 65 (1915) 42.

Mindoro, Mindanao (Zamboanga), *Williams 2356, B. S. 39662 Ramos*. In forests or thickets, altitude 165 m. Endemic.

CLEISTANTHUS BARROSII Merr. in Philip. Journ. Sci. 20 (1922) 400.

Luzon (Isabela), *F. B. 26070 Barros*. In primary forests at low altitudes. Endemic.

CLEISTANTHUS BLANCOI Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 315; Jabl. in Engl. Pflanzenreich 65 (1915) 13; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 193.

Cleistanthus ferrugineus F.-Vill. Novis. App. (1880) 187; Vidal Sinopsis Atlas (1883) 38, t. 82, f. C, non Muell.-Arg.

Cleistanthus orgyalis Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 353, non Blanco.

Cleistanthus patulus Naves l. c., non Muell.-Arg.

Cleistanthus laevis C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 193, non Hook. f.

Luzon (Isabela, Nueva Ecija, Bataan, Rizal, Camarines), Samar, Mindanao (Zamboanga), *B. S. 2681, 8031 Ramos, 26272 Ramos & Edaña, F. B. 22801 Diaz & Alambra, 26876 Villafior, Merrill Phil. Pl. 1648*. In thickets and forests at low altitudes. Endemic.

Local names: Aniatam (Tag.); kandañgisan (Bik.).

CLEISTANTHUS BRIDELIFOLIUS C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 191, 6 (1911) Bot. 323; Jabl. in Engl. Pflanzenreich 65 (1915) 25.

Cleistanthus subcordatus Jabl. in Engl. Pflanzenreich 65 (1915) 22, p. p., quoad Philip.

Luzon (Cagayan, Ilocos Norte, Pangasinan, Zambales, Tayabas, Camarines), Alabat, Guimaras, Negros, *F. B.* 7064 Klemme, 292 Gammill, 25547 Cenabre, *B. S.* 33063 Ramos, 25465, 25427 Yates, 29911 Fénix, 26774 Edaño, 28676, 28501 Ramos & Edaño, Merrill 10467. In forests at low altitudes. Endemic.

Local names: Makimar (Neg.); salimaṅgmáṅgan (P. Bis.); sarimisim (Bik.).

CLEISTANTHUS DECIPIENS C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 195; Elm. Leaf. Philip. Bot. 4 (1911) 1284; Jabl. in Engl. Pflanzenreich 65 (1915) 33.

Ticao, Mindanao (Zamboanga), Mindoro, Palawan, Panay, *F. B.* 1001 Clark, *B. S.* 27397, 40901, 40991 Ramos, 35589 Martelino & Edaño, *F. B.* 9037 Whitford & Hutchinson, Elmer 12888, 12988. In primary forests at low altitudes. Endemic.

CLEISTANTHUS EVERETTII C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 194; Jabl. in Engl. Pflanzenreich 65 (1915) 53.

Luzon (Apayao), Negros, Mindanao (Bukidnon), *F. B.* 7274 Everett, *B. S.* 26015, 28066 Fénix. In primary forests at low altitudes. Endemic.

CLEISTANTHUS INTEGER C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 196; Elm. Leaf. Philip. Bot. 3 (1910) 908; Jabl. in Engl. Pflanzenreich 65 (1915) 45, f. 6, E-G.

Luzon (Cagayan, Apayao, Rizal, Tayabas, Camarines), Sibuyan, Mindanao (Surigao, Zamboanga), Basilan, *F. B.* 3076 Ahern's collector, *B. S.* 28184 Fénix, 25391 Yates, 16078 Reillo, *F. B.* 26607 Bernardo, 21464, 21445 Alvarez, 25539 Cenabre, 22839 Ponce, 24164, 24153 Miranda, Elmer 12244. In primary forests at low altitudes. Endemic.

Local names: Bato-bató (Bik.); anúpag (C. Bis.); tibi-tibi (Tag.).

CLEISTANTHUS ISABELLINUS Elm. Leaf. Philip. Bot. 3 (1910) 911; Jabl. in Engl. Pflanzenreich 65 (1915) 40.

Sibuyan, Elmer 12268. In forests, altitude about 225 m. Endemic.

CLEISTANTHUS MEGACARPUS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 232; Jabl. in Engl. Pflanzenreich 65 (1915) 31.

Mindoro, Sibuyan, Negros, Samar, Mindanao (Lanao, Zamboanga), Whitford 1443, *F. B.* 3716, 6727 Merritt, 12204 Rosenbluth, 23596 Lasquety, 25908 Alviar, 22009 Villamil, *B. S.* 40870, 41063 Ramos, Elmer 12381. In primary forests at low altitudes. Borneo.

Local name: Baubo (Sul.).

CLEISTANTHUS MINDANAENSIS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 324; Jabl. in Engl. Pflanzenreich 65 (1915) 41.

Mindanao (Zamboanga), *F. B.* 9474, 9444 Whitford & Hutchinson. In primary forests at low altitudes. Endemic.

CLEISTANTHUS MISAMISENSIS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 325; Jabl. in Engl. Pflanzenreich 65 (1915) 41.

Samar, Leyte, Negros, Mindanao (Misamis, Zamboanga), *F. B.* 15468 Pray, 21977 Cailipan, *B. S.* 36822, 36851 Ramos & Edaño, Ahern 577, Merrill Phil. Pl. 1686. In primary forests at low altitudes. Endemic.

Local names: Banitlong (Sul.); buru (Yak.); gasabod (Sub.); mala-kayang-batang (Sul.).

CLEISTANTHUS MYRIANTHUS (Hassk.) Kurz Forest Fl. Brit. Burma (1877) 370; Hook. f. Fl. Brit. Ind. 5 (1887) 275; F.-Vill. Novis. App. (1880) 187; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 191; Jabl. in Engl. Pflanzenreich 65 (1915) 37, f. 7, A-D.

Nanopetalum myrianthum Hassk. in Verh. Acad. Amst. 24 (1855) 140; Muell.-Arg. in DC. Prodr. 15² (1866) 510.

Cleistanthus pseudocanescens Elm. Leaf. Philip. Bot. 3 (1910) 910, 4 (1911) 1284.

Luzon (Pangasinan, Tayabas, Camarines), Mindoro, Palawan, Balabac, Masbate, Leyte, Panay, Mindanao (Cotabato), Basilan, *Merrill 1812, Elmer 12140, 12890, 12955, 13053, Wenzel 1277, 1784, F. B. 17694 Otanes, 11630 Whitford, 21485 Fernandez, 1005 Clark, B. S. 15655 Fénix, 26949 Edaño, 31386 Ramos & Edaño*. In forests at low altitudes. Burma, through Malaya to New Guinea.

Local names: Bakayau (Pang.); bayakbak (Pang.); brungau (Sul.); kadakugsol (Bik.); paguriñgan (Mag.); yañgo (P. Bis.).

Subsp. **CUPREUS** (Vidal) Jabl. in Engl. Pflanzenreich 65 (1915) 39.

Cleistanthus cupreus Vidal Rev. Pl. Vasc. Filip. (1886) 235; Koord.

Meded. Lands Plantent. 19 (1898) 582; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 191.

Luzon (Rizal, Camarines), Marinduque, Balabac, *Vidal 588, B. S. 3307 Ramos, 10673 Mangubat, F. B. 10673 Curran*. In primary forests at low altitudes. This form endemic or, perhaps, also in Celebes.

CLEISTANTHUS ORGYALIS (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 75, Sp. Blancoanae (1918) 220; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 189; Jabl. in Engl. Pflanzenreich 65 (1915) 42.

Gluta orgyalis Blanco Fl. Filip. ed. 2 (1845) 451, ed. 3, 3 (1879) 49.

Cneorum tricoccum Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 105, non DC.

Luzon (Bulacan), *F. B. 7174, 7175, 7169 Curran*. On river banks at low altitudes. Endemic.

CLEISTANTHUS OVATUS C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 194; Jabl. in Engl. Pflanzenreich 65 (1915) 34.

Babuyan Islands, Luzon (Ilocos Norte), *B. S. 4051 Fénix, 27469, 27349 Ramos, F. B. 26649 Velasco*. In primary forests at low altitudes. Endemic.

CLEISTANTHUS PILOSUS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 326; Jabl. in Engl. Pflanzenreich 65 (1915) 33.

Basilan, Mindanao (Zamboanga), *F. B. 19511 Almagro, 27034 Malana, B. S. 36610 Ramos & Edaño*. In primary forests at low altitudes. Endemic.

CLEISTANTHUS QUADRIFIDUS C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 197; Jabl. in Engl. Pflanzenreich 65 (1915) 44.

Leyte, Cebu, Mindanao (Surigao, Zamboanga), Basilan, *F. B.* 9478 Whitford & Hutchinson, 6441 Everett, 18923 Miranda, 27108 Leuterio & Mallonga, Wenzel 1320. In primary forests at low altitudes. Endemic.

Local names: Gusukan (C. Bis.); mobatu (C. Bis.).

CLEISTANTHUS ROBINSONII Elm. Leaf. Philip. Bot. 3 (1910) 909; Jabl. in Engl. Pflanzenreich 65 (1915) 52.

Sibuyan, *Elmer* 12540. On forested slopes, altitude about 300 m. Endemic.

CLEISTANTHUS SAMARENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 475.

Samar, Biliran, Mindanao (Agusan), *Merrill Phil. Pl.* 1685, *B. S.* 18613 McGregor, *F. B.* 28645 Mallonga. In forests up to 300 m altitude. Endemic.

Local name: Abo-abo (C. Bis.).

CLEISTANTHUS VENOSUS C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 192; Jabl. in Engl. Pflanzenreich 65 (1915) 12.

Mindanao (Zamboanga), *Williams* 2187, 2186. In forests up to 300 m altitude. Endemic.

CLEISTANTHUS VIDALII C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 193, 6 (1911) Bot. 327; Jabl. in Engl. Pflanzenreich 65 (1915) 15.

Cleistanthus blancoi Vidal Rev. Pl. Vasc. Filip. (1886) 234, non Rolfe.

Cleistanthus pallidus F.-Vill. Novis. App. (1880) 187, non Muell.-Arg. *Kaluhaburunghos blancoi* O. Kuntze Rev. Gen. Pl. 2 (1891) 607.

Luzon (Bataan, Tarlac), Palawan, *Vidal* 559, *Merrill* 2883, 2573, *Phil. Pl.* 2094, *F. B.* 28675 Pascual. In forests at low altitudes. Endemic.

Local name: Buliti (Pamp.).

16. BRIDELIA Willdenow

BRIDELIA ACUMINATISSIMA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 473.

Luzon (Camarines), *Merrill Phil. Pl.* 1551. Along streams in forests at low altitudes. Endemic.

BRIDELIA GLABRIFOLIA (Muell.-Arg.) comb. nov.

Bridelia lancaefolia Jabl. in Engl. Pflanzenreich 65 (1915) 60, non Roxb., nec Kurz.

Bridelia tomentosa Blume var. *lancaefolia* Muell.-Arg. in DC. Prodr. 15² (1866) 502; Gehrm. in Engl. Bot. Jahrb. 41 (1908) Beibl. 95: 29.

Bridelia tomentosa Blume var. *glabrifolia* Muell.-Arg. ex Jabl. l. c. in syn.

Bridelia tomentosa F.-Vill. Novis. App. (1880) 186; Vidal Rev. Pl. Vasc. Filip. (1886) 234; Usteri Beitr. Ken. Philip. Veg. (1904) 126; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 78, non Blume.

Breynia tomentosa Ceron Cat. Pl. Herb. Manila (1892) 149, sphalm.

Luzon (Ilocos Norte, Abra, Bontoc, Union, Pangasinan, Nueva Ecija, Bulacan, Bataan, Batangas, Rizal), Culion, Panay, Guimaras, Bongao. Common in thickets, second-growth forests, etc., at low and medium al-

titudes. Very closely allied to *B. monoica* (Lour.) Merr. (*B. tomentosa* Blume). Endemic.

Local names: Agai (Tag.); baransiágau (Ilk.); lanúti (Tag.); lusbán (Ting., Ilk.); malapilin (Pang.); managása (P. Bis.); máta (Ig.); panayumen (Ilk.); tongal (Ig.).

BRIDELIA GLAUCA Blume Bijdr. (1825) 597; Jabl. in Engl. Pflanzenreich 65 (1915) 74.

Bridelia multiflora Zipp. ex Scheffer in Miq. Ann. Mus. Bot. Lugd.-Bat. 4 (1868-69) 119; Jabl. in Engl. Pflanzenreich 65 (1915) 75; Hallier f. in Meded. Rijks Herb. 1 (1911) 7.

Luzon (Tayabas, Camarines), Leyte, Mindanao, *F. B. 10679 Curran, 20281 Miranda, B. S. 15688 Fénix, 19533 Ramos, 37053 Ramos & Edaño, Wenzel 411, 1048, Elmer 9699, 13298, Clemens 373, 827*. In forests at low altitudes. Java.

Forma **LAURIFOLIA** (Elm.) Jabl. in Engl. Pflanzenreich 65 (1915) 75.

Bridelia laurifolia Elm. ex Jabl. l. c. in syn., Leaflet. Philip. Bot. 7 (1915) 2637.

Luzon (Benguet, Bontoc, Nueva Ecija), *Elmer 6099, 6085, 7266, 8520, Williams 1559, Baker 4090, B. S. 11367, 11255 McGregor, 37953 Ramos & Edaño*. In thickets, altitude 1,000 to 1,500 m. Endemic.

Local names: Baroan (Bag.); balitahan (C. Bis.); kagamio (S. L. Bis.); kapo-kapo (Sul.); lambiluan (Buk.); naraniai (Ig.); palapos (Sub.); sakaban (Bik.); tanog (Mbo.).

BRIDELIA MINUTIFLORA Hook. f. Fl. Brit. Ind. 5 (1887) 273; J. J. Sm. in Koord. & Val. Bijdr. Boom. Java 12 (1910) 314; Jabl. in Engl. Pflanzenreich 65 (1915) 76.

Bridelia platyphylla Merr. in Philip. Journ. Sci. 7 (1912) Bot. 384.

Bridelia ovata Merr. in Philip. Bureau Forestry Bull. 1 (1903) 30, non Decne.

Luzon (Cagayan, Tayabas, Laguna, Batangas, Camarines), Palawan, Tablas, Leyte, Mindanao (Davao, Cotabato, Misamis, Zamboanga), Sulu Archipelago. In primary forests at low altitudes; two forms, one with large leaves, one with relatively small ones, perhaps var. *abbreviata* J. J. Sm. Intergrades occur. Tenasserim to New Guinea.

Local names: Bagotadhan (P. Bis.); kiblagon (Tagk.); magantumit (Bik.); magatápai (Tagk.); manasa (Tag.); maragata (Neg.); pahobo (Tag.); subiang (Tag.); tagutúnġan (Bik.); tamarina (Neg.); taran (Sul.); usli (Tagb.).

BRIDELIA MONOICA (Lour.) Merr. in Philip. Journ. Sci. 13 (1918) Bot. 142.

Clusia monoica Lour. Fl. Cochinch. (1790) 638.

Cleistanthus monoicus Muell.-Arg. in DC. Prodr. 15² (1866) 508; Jabl. in Engl. Pflanzenreich 65 (1915) 53.

Bridelia loureiri Hook. & Arn. Bot. Beechy Voy. (1841) 211.

Bridelia tomentosa Blume Bijdr. (1825) 597; Miq. Fl. Ind. Bat. 1² (1858-59) 364; Muell.-Arg. in DC. Prodr. 15² (1866) 501; Gehrm. in Engl. Bot. Jahrb. 41 (1908) Beibl. 95: 32; Jabl. in Engl. Pflanzenreich 65 (1915) 58, f. 11.

Palawan, *B. S.* 207 *Bermejos*, *F. B.* 3499 *Curran*. In thickets and forests at low altitudes. The Philippine form here referred to this species, after Jablonsky, is scarcely distinguishable from *Bridelia glabrifolia* (Muell.-Arg.) Merr. India to southern China and Formosa southward to New Guinea.

BRIDELIA STIPULARIS (Linn.) Blume Bijdr. (1825) 597; Miq. Fl. Ind. Bat. 1² (1858-59) 364; Muell.-Arg. in DC. Prodr. 15² (1866) 499; Hook. f. Fl. Brit. Ind. 5 (1887) 270; Gehrm. in Engl. Bot. Jahrb. 41 (1908) Beibl. 95: 29; F.-Vill. Novis. App. (1880) 186; Vidal Phan. Cuming. Philip. (1885) 141; Sinopsis Atlas (1883) 38, *t.* 82, *f. F.*, Rev. Pl. Vasc. Filip. (1886) 233; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 78, Fl. Manila (1912) 284, Sp. Blancoanae (1918) 220.

Clutia stipularis Linn. Mant. 1 (1767) 127; Blanco Fl. Filip. (1837) 818, ed. 2 (1845) 564, ed. 3, 3 (1879) 229.

Luzon (Cagayan to Laguna and Tayabas, common), Mindoro, Palawan, Ticao, Panay, Cebu, Bohol. In thickets at low altitudes. The Philippine form is the subsp. *philippinensis* Jabl. in Engl. Pflanzenreich 65 (1915) 57, which is scarcely distinguishable from the typical form. India to China southward to the Moluccas.

Local names: Alub-alub (Sbl.); annám (Ilk.); bangkoilan (Tag.); bo-ko-boko (C. Bis.); kuto-kuto (Tag.); karáka (Ilk.); dugaron (Pamp.); hĩngōngoto (Tag.); kalundagi (Pang.); karabau (Ilk.); karauai (Ilk.); karioaoi (Ig.); kauilan (P. Bis.); kulandagi (Pang.); sangkoilang (Bis.); llobalob (Tag.); lubalo (Pamp.); kutukuto (Tag.); lubalub (Tag.); sinkoilan (Bis.).

EXCLUDED SPECIES

BRIDELIA MONTANA Willd.; F.-Vill. Novis. App. (1880) 186.

BRIDELIA OVATA Muell.-Arg.; F.-Vill. l. c.

BRIDELIA RETUSA Muell.-Arg. F.-Vill. l. c.

BRIDELIA SCANDENS Willd.; Naves & F.-Vill. in Blanco Fl. Filip. ed. 3, 4¹ (1880) 103.

17. DAPHNIPHYLLUM Blume

DAPHNIPHYLLUM BORNEENSE Stapf in Trans. Linn. Soc. Bot. 4 (1894) 224; Hallier f. in Beih. Bot. Centralbl. 34² (1916) 21; K. Rosenth. in Engl. Pflanzenreich 68⁵ (1917) 14.

Mindanao (Davao, Bukidnon, Agusan), *Elmer* 13753, 11671, 11344 as *D. glaucescens* Blume, *B. S.* 38743, 38507, 38516, 38552 *Ramos & Edaño*, Borneo. The identity of these with Stapf's species, *Clemens* 106561, 109461, is by no means certain.

Local names: Ali (Buk.); butuñgal (Buk.); haugoi (Mbo.); panayasan (Bag.).

DAPHNIPHYLLUM BUCHANANIFOLIUM Hallier f. in Meded. Rijks Herb. Leiden 37 (1918) 13.

Daphniphyllum glaucescens Elm. Leaf. Philip. Bot. 4 (1911) 1285; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 356, non Blume.

Luzon (Benguet), *Elmer 8538, F. B. 18357 Alvarez, 18151 Curran, Merritt, & Zschokke, B. S. 40478 Ramos & Edaño*. On forested slopes, altitude 1,500 to 1,900 m. Endemic.

Local name: Inutatan (Ig.).

DAPHNIPHYLLUM LUZONENSE Elm. Leaf. Philip. Bot. 1 (1908) 309; K. Rosenth. in Engl. Pflanzenreich 68⁵ (1917) 14.

Daphniphyllum acutifolium Hallier f. in Beih. Bot. Centralbl. 34² (1916) 20, in nota, quoad Philip., non Muell.-Arg.

Luzon (Ilocos Norte, Benguet, Bontoc, Ifugao, Camarines), Mindoro, Palawan, Leyte, Camiguin de Misamis, *Merrill 5658, 9494, Phil. Pl. 1503, 1748, Elmer 6290, 8615, B. S. 32838, 14623, 15235 Ramos*. In forests at medium altitudes, ascending to 1,900 m. Endemic.

DAPHNIPHYLLUM OBTUSIFOLIUM Merr. in Philip. Journ. Sci. 14 (1920) 552.

Luzon (Tayabas, east coast), *B. S. 28705, 28662 Ramos & Edaño*. In primary forests, altitude about 1,000 m. Endemic.

DAPHNIPHYLLUM ROXBURGHII Baill. Étud. Gén. Euphorb. (1858) 565, *nomen nudum*; Benth. Fl. Hongk. (1861) 316; Rosenth. in Engl. Pflanzenreich 68⁵ (1919) 9.

Daphniphyllum teysmanni Zoll. ex Teysm. & Binn. in Nat. Tijdschr. Nederl. Ind. 27 (1864) 52; Hallier f. in Beih. Bot. Centralbl. 34² (1916) 21.

Daphniphyllum buergeri Muell.-Arg. in DC. Prodr. 16¹ (1869) 3.

Palawan, (*Elmer 13194*), fide Hallier f. The species is admitted on Hallier's identification, as I have not seen Elmer's specimen. The range, eastern China, Japan, and Riu Kiu Islands, leads me to doubt the correctness of Hallier's identification.

18. **CROTON** Linnaeus

CROTON ARGYRATUS Blume Bijdr. (1825) 602; Muell.-Arg. in DC. Prodr. 15² (1866) 526; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 278; Elm. Leaf. Philip. Bot. 4 (1911) 1280.

Croton cupreus Elm. Leaf. Philip. Bot. 4 (1911) 1281.

Babuyan Islands, Luzon (Ilocos Sur, Zambales, Batangas, Bulacan, Rizal), Palawan, Leyte, Mindanao (Zamboanga, Cotabato), Basilan. In forests at low altitudes. Burma to the Andaman Islands, Malay Peninsula, Sumatra, Java, and Borneo.

CROTON CAUDATUS Geisel. Crot. Monogr. (1807) 73; Muell.-Arg. in DC. Prodr. 15² (1866) 599; F.-Vill. Novis. App. (1880) 192.

Luzon (Benguet, Pangasinan, Rizal), Palawan, *Merrill Phil. Pl. 1243, Elmer 6461, B. S. 484, 3318 Ramos, F. B. 1124 Ahern's collector*. In thickets and ravines at low altitudes, ascending to 400 m. India to southern China southward to Sumatra, Java, Christmas Island, and Borneo.

Local name: Alimpai (Tag.).

CROTON COLUBRINOIDES Merr. in Philip. Journ. Sci. 9 (1914) Bot. 451.

Luzon (Bontoc), *Vanoverbergh 3107, B. S. 37676 Ramos & Edaño*. On slopes, altitude 1,300 m. Endemic.

CROTON CONSANGUINEUS Muell.-Arg. in Linnaea 34 (1865) 101, DC. Prodr. 15² (1866) 619; F.-Vill. Novis. App. (1880) 192; Vidal Rev. Pl. Vasc. Filip. (1886) 241; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 78.

Croton sanguineus Vidal Phan. Cuming. Philip. (1885) 143, sphalm.

Luzon (Zambales, Bulacan, Bataan, Rizal), Leyte, Bohol, *Cuming* 1871, *Merrill* 2977, *B. S.* 29617, 34208, 34029 *Ramos & Edaño*, *F. B.* 2637, 2814 *Meyer, Wenzel* 1435, 1291, 1759. In thickets and forests at low altitudes. Endemic.

Local name: Malatúba (Tag., Bik.).

CROTON CUMINGII Muell.-Arg. in Linnaea 34 (1865) 101, DC. Prodr. 15² (1866) 566; F.-Vill. Novis. App. (1880) 191; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 241.

Luzon (Nueva Ecija, Bataan, Camarines), Mindoro, Palawan, Cagayan Sulu, *Cuming* 1884, *Merrill* 5303, *Phil. Pl.* 1227, *B. S.* 260 *Bermijos*, 6188 *Robinson*, *F. B.* 8628 *Merritt*, *Ahern* 265. In thickets at low altitudes. Malay Peninsula, Borneo, Indo-China, Formosa, Riu Kiu Islands; to be compared with *C. punctatus* Lour.

CROTON HETEROCARPUS Muell.-Arg. in DC. Prodr. 15² (1866) 621; Hallier f. in Meded. Rijks Herb. 1 (1911) 7.

Croton ardisioides Hook. f. Fl. Brit. Ind. 5 (1887) 393; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 278.

Palawan, *Elmer* 12788, *B. S.* 857 *Foxworthy*, *F. B.* 3831, 4159 *Curran*. In thickets at low altitudes. Malay Peninsula, Sumatra, Borneo.

CROTON LANCILIMBUS Merr. in Philip. Journ. Sci. 20 (1922) 395.

Mindanao (Zamboanga), *B. S.* 36855, 37078 *Ramos & Edaño*. Along streams at low altitudes. Endemic.

CROTON LEIOPHYLLUS Muell.-Arg. in Linnaea 5 (1865) 103, DC. Prodr. 15² (1866) 573; F.-Vill. Novis. App. (1880) 192; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 242; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 30, Philip. Journ. Sci. 1 (1906) Suppl. 78; Elm. Leaf. Philip. Bot. 3 (1910) 912, 4 (1911) 1280.

Luzon (Cagayan to Sorsogon) to Palawan and Mindanao. Widely distributed and often common in thickets and forests at low and medium altitudes. Endemic unless referable to the Malayan *C. oblongus* Burm. f. (*C. laevifolius* Blume, *C. griffithii* Hook. f.).

Local names: Katap (Sul.); kuribeng (Ilk.); kokonon (Tagb.); malatúba (Tagb., S. L. Bis.); sangñgar (Neg.); tagóan-uák (Tag.).

Var. **MULTIFLORUS** var. nov.

A typo differt foliis majoribus, usque ad 20 cm longis et 11 cm latis, petiolis longioribus, usque ad 7 cm longis, floribus numerosis.

Luzon (Isabela), Panay, Balabac, Siargao, *F. B.* 24079 *Barros* (type), *B. S.* 31022, 31329, 31457 *Ramos & Edaño*, 34830, 34831 *Ramos & Pascasio*, 15657 *Fénix*. In forests at low altitudes. Endemic.

Local name: Lareg (Ilk.).

CROTON LUZONIENSIS Muell.-Arg. in *Linnaea* 34 (1865) 118, DC. Prodr. 15² (1866) 624; F.-Vill. Novis. App. (1880) 192; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 241.

Luzon (Cagayan, Isabela, Bontoc, Union, Bataan, Zambales, Rizal), *Cuming* 1136, *B. S.* 1751, 7984 *Ramos, F. B.* 24788 *Borromeo, 2004, 2458, 3084 Ahern's collector, Loher* 4691, 6868. In thickets and forests at low altitudes, ascending to 1,400 m. Endemic.

Local name: Pagaibayong (Ig.).

CROTON TIGLIUM Linn. Sp. Pl. (1753) 1004; Muell.-Arg. in DC. Prodr. 15² (1866) 600; Miq. Fl. Ind. Bat. 1² (1858-59) 379; F.-Vill. Novis. App. (1880) 192; Vidal Rev. Sinopsis Atlas (1883) 38, *t.* 83, *f. E*, Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 242; Merr. Sp. Blancoanae (1918) 220.

Croton camaza Perr. in Mém. Soc. Linn. Paris 3 (1824) 112; C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 305.

Croton glandulosum Blanco Fl. Filip. (1837) 754.

Croton muricatum Blanco op. cit. ed. 2 (1845) 518, ed. 3, 3 (1879) 154, *t.* 383; Muell.-Arg. in DC. Prodr. 15² (1866) 693.

Tiglim officinale Klotz in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 418.

Throughout the Philippines in and about towns, usually planted, sometimes naturalized. Of prehistoric introduction from Malaya; universally used for poisoning fish. India to New Guinea.

Local names: Gasi (Sul.); kamágsa (Bik.); kamaísa (Tag.); kamandag (Bis.); kamausa (Tag.); kásla (Sul.); lutung-sira (Bik.); makaísa (Tag.); makásla (P. Bis.); malapai (Sul.); salígau (Ilk., Ibn.); túba (Ilk., Bik., Tag., S. L. Bis., P. Bis., Sul.); tuba-túba (Bik., P. Bis.); tubang-kamaísa (Tag.); tubang-makaísa (Bik., Tag.); tubang-pasíti (Bik.); túbli (C. Bis.); túkbu (If.).

CROTON VERREAUXII Muell.-Arg. in *Linnaea* 34 (1865) 117, Prodr. 15¹ (1866) 620, var. **ANGUSTIFOLIUS** Muell.-Arg. l. c.; F.-Vill. Novis. App. (1880) 192; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 241.

Luzon (Ilocos Norte, Pampanga, Bulacan, Batangas), *Cuming* 736, *F. B.* 13539, 15526 *Merritt & Darling, 17710 Curran, B. S.* 22356 *Ramos*. In thickets and forests at low altitudes. The variety endemic, the species and other varieties New Guinea, Australia, and Polynesia.

Local name: Arasaligau (Ilk.).

EXCLUDED SPECIES

CROTON LACHNOCARPUS Benth.; F.-Vill. Novis. App. (1880) 192.

CROTON COCCINEUM Pers.; Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 103.

CROTON RHOMBIFOLIUM Spreng; Llanos l. c.

19. DORYXYLON Zollinger

(*Sumbavia* Baillon)

DORYXYLON SPINOSUM Zoll. in Nat. Tijdschr. Nederl. Ind. 14 (1857) 152; Merr. Sp. Blancoanae (1918) 221.

Adelia acidoton Blanco Fl. Filip. (1837) 815, ed. 2 (1845) 562, ed. 3, 3 (1879) 226, t. 463, non Linn.

Sumbavia rottleroides Baill. Étud. Gén. Euphorb. (1858) 390; F.-Vill. Novis. App. (1880) 193; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 243; Merr. Fl. Manila (1912) 291; Pax in Engl. Pflanzenreich 57 (1912) 12, f. 2, A-D.

Mercadoa mandalojonensis Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 463.

Luzon (Cagayan, Union, Nueva Ecija, Pangasinan, Pampanga, Bulacan, Rizal, Laguna), Merrill Sp. Blancoanac 933, Phil. Pl. 387, Warburg 11812, 14010, F. B. 3165 Ahern's collector. In thickets on dry slopes at low altitudes. Bima, Sumbava, Java.

Local names: Balintauák (Pamp.); dilap (Tag.); kilap (Tag.); kirap (Tag.); kum-mo (Ilk.); malabulauan (Pamp.).

20. SUMBAVIOPSIS J. J. Smith

SUMBAVIOPSIS ALBICANS (Blume) J. J. Sm. in Koord. & Val. Bijdr. Boom. Java 12 (1910) 357; Pax in Engl. Pflanzenreich 57 (1912) 14, 63 (1914) 424; Elm. Leaf. Philip. Bot. 4 (1911) 1304.

Adisca albicans Blume Bijdr. (1825) 611.

Cephalocroton albicans Muell.-Arg. in DC. Prodr. 15² (1866) 760.

Palawan, Elmer 12636. In primary forests at low altitudes. Java, Sumatra; a monotypic genus.

Local name: Dabdad-balod (Tagb.).

21. AGROSTISTACHYS Dalzell

AGROSTISTACHYS LEPTOSTACHYA Pax & K. Hoffm. in Engl. Pflanzenreich 57 (1912) 102; Merr. in Philip. Journ. Sci. 16 (1920) 553.

Luzon (Camarines), Mindanao (Surigao), Bur. Sci. 33688 Ramos & Edaño, 34573 Ramos & Pascasio. In forests along streams at low and medium altitudes. Borneo.

AGROSTISTACHYS MAESOANA Vidal Rev. Pl. Vasc. Filip. (1868) 242; Ceron Cat. Pl. Herb. Manila (1892) 152; Elm. Leaf. Philip. Bot. 4 (1911) 1276.

Agrostistachys indica Dalz. var. *maesoana* Pax & Hoffm. in Engl. Pflanzenreich 57 (1912) 105 (*massoana*).

Luzon (Cagayan, Isabela, Apayao, Tayabas), Palawan, Bancalan, Samar, Leyte, Negros, Panay, Mindanao, Basilan. In primary forests at low and medium altitudes. Endemic.

Local names: Haginis (P. Bis.); kakao-kakao (Bis.).

22. BLUMEODENDRON (Mueller-Arg.) Kurz

BLUMEODENDRON PAUCINERVIUM (Elm.) Merr. in Philip. Journ. Sci. 16 (1920) 555.

Elatiospermum paucinervium Elm. Leaf. Philip. Bot. 2 (1908) 484, 3 (1910) 915; Pax in Engl. Pflanzenreich 44 (1910) 102; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 382, in nota.

Luzon (Tayabas, Bataan), Sibuyan, Elmer 7416, 12367, F. B. 758 Borden. In forests up to 750 m altitude; allied to the Javan *Blumeodendron tokbrai* Kurz. Endemic.

BLUMEODENDRON PHILIPPINENSE Merr. & Rolfe in Philip. Journ. Sci. 16 (1920) 555.

Luzon (Bataan, Laguna), *F. B.* 630, 2377 Borden, 2401 Meyer, 7511, 7228 Curran, 12962 Alvarez, 20054 Topacio, 24782 Sulit, *B. S.* 16549 Ramos, Williams 699, Whitford 339. In primary forests at low and medium altitudes. Endemic.

BLUMEODENDRON SUBCAUDATUM Merr. in Philip. Journ. Sci. 16 (1920) 557.

Luzon (Sorsogon), Samar, Panay, *F. B.* 10598 Curran, 21075, 21069 Sherfese, Cenabre, & Cortes, 24643 Phasis, 23928 Cortes & Knapp, *B. S.* 17407 Ramos. In primary forests at low altitudes. Endemic.

Local names: Lindog (P. Bis); sabunotan (S. L. Bis.); salnḡḡan (S. L. Bis.).

BLUMEODENDRON SUBROTUNDIFOLIUM (Elm.) Merr. in Philip. Journ. Sci. 7 (1912) Bot. 384; 16 (1920) 558; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 49.

Sapium subrotundifolium Elm. Leaf. Philip. Bot. 3 (1910) Bot. 930.

Sibuyan, Elmer 12349. In forests at low or medium altitudes. Endemic.

BLUMEODENDRON VERTICILLATUM Merr. in Philip. Journ. Sci. 16 (1920) 557.

Luzon (Bataan), Mindoro, *F. B.* 2603 Meyer, 1190 Borden, 1515 Ahern's collector, *B. S.* 40911 Ramos. In primary forests, altitude about 600 m. Endemic.

23. CLAOXYLON Jussieu

CLAOXYLON ALBICANS (Blanco) Merr. Sp. Blancoanae (1918) 220, excl. syn. *C. elongatum* Merr.

Prockia ? *albicans* Blanco Fl. Filip. (1837) 430, ed. 2 (1845) 299, ed. 3, 2 (1878) 192.

Claoxylon rubescens Miq. var. *cumingianum* Muell.-Arg. in DC. Prodr. 15² (1866) 788.

Luzon (Pangasinan, Bulacan, Laguna, Cavite, Batangas), *Cuming* 515, 598, Merrill Sp. Blancoanae 1008, *B. S.* 29915 Fénix, 12365, 12480 McGregor, 13692 Ramos, 22510, 22560 Ramos & Deroy, 24022 Ramos & Edaño, Baker 151, 153, 2085, 1762. In thickets and second-growth forests at low altitudes. Endemic.

Local name: Busilak (Tag.).

CLAOXYLON ARBOREUM Elm. Leaf. Philip. Bot. 2 (1908) 486; Pax & K. Hoffm. in Engl. Pflanzenreich 63 (1914) 129, excl. syn. *C. elongatum* Merr.

Claoxylon pedicellare Pax & K. Hoffm. in Engl. Pflanzenreich 63 (1914) 114.

Claoxylon grandifolium Elm. Leaf. Philip. Bot. 7 (1915) 2638.

Leyte, Samar, Camiguin de Misamis, Mindanao (Agusan, Lanao), Elmer 7335, 13872, Clemens 620, 1093, Ahern 499, Wenzel 55, 332, 900, 1050, 1317, *B. S.* 14456, 24552 Ramos. In forests at low and medium altitudes. Endemic.

Pax and Hoffmann misinterpreted *Claoxylon arboreum* Elm., citing the type and only specimen mentioned in its original description as representing *C. pedicellare* Pax & Hoffm.

Local names: Balongsagai (Mbo.); banata (S. L. Bis.); magabadbad (Bag.); sagai (C. Bis.).

CLAOXYLON BRACHYANDRUM Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 115.

Claoxylon rubescens Muell.-Arg. in DC. Prodr. 15² (1866) 788, p. p. (incl. var. *meyenianum* Muell.-Arg.); F.-Vill. Novis. App. (1880) 193; Vidal Rev. Pl. Vasc. Filip. (1886) 243, Phan. Cuming. Philip. (1885) 142; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 79, 3 (1908) Bot. 416; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 118, pro majore parte, non Miq.

Claoxylon rubrinerve Baill. Étud. Gén. Euphorb. (1858) 493, *nomen nudum*.

Batan Islands, Luzon (Cagayan, Bontoc, Benguet, Ilocos Norte, Ilocos Sur, Pampanga, Rizal), Culion, Palawan, Panay, Mindanao (Bukidnon), Cuming 1137, Merrill 9611, 9479, 667, Loher 4704, 4708, B. S. 29313, 29637, 39125, 37628 Ramos & Edaña, 230 Bermejós, 1025 Ramos, 12735 Fénix, F. B. 2918 Borden. In forests at low and medium altitudes, ascending to 1,400 m. Endemic.

Local names: Kolutatang (Neg.); maratúba (Ilk.); tanau-tanau (Neg.); tuñgou (Iv.); uñgalau (Neg.).

CLAOXYLON CRASSIPES Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 121.

Luzon (Tayabas, east coast), B. S. 9361, 9396 Robinson. In the mossy forest, altitude about 900 m. Endemic.

CLAOXYLON CRASSIVENIUM Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 120.

Mindoro, Merrill 5668. In forests, altitude about 2,000 m. Endemic.

CLAOXYLON ELLIPTICUM Merr. in Philip. Journ. Sci. 16 (1920) 553.

Panay, B. S. 32303 McGregor. In forests, altitude about 800 m. Endemic.

CLAOXYLON ELONGATUM Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 204; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 112 (excl. syn. *C. arboreum* Elm.).

Luzon (Laguna, Tayabas), Merrill 5141, Phil. Pl. 1047, Elmer 9204, B. S. 17934 Brown, 20591 Ramos, 28825 Ramos & Edaña, F. B. 25377, 23816 Mabesa. In primary forests at low and medium altitudes. *Claoxylon arboreum* Elm. is not certainly distinct. Endemic.

CLAOXYLON EUPHORBIOIDES (Elm.) comb. nov.

Quadrasia euphorbioides Elm. Leaflet, Philip. Bot. 7 (1915) 2656.

Sibuyan, Negros, Elmer 12424, 12423, 12473, B. S. 15183 Ramos. In primary forests, ascending to 600 m. Endemic.

The genus *Quadrasia* proposed by Mr. Elmer in the Flacourtiaceae proves to be identical with *Claoxylon*, the species being allied to *C. subtride* Elm., but differing especially in its fruit characters.

Local name: Lagino (P. Bis.).

CLAOXYLON OBLANCEOLATUM (Merr.) Pax & K. Hoffm. in Engl. Pflanzenreich 63 (1914) 115.

Claoxylon rubescens Miq. var. *oblanceolatum* Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 79.

Luzon (Ilocos Norte, Nueva Ecija, Zambales, Bataan, Camarines), *F. B.* 1760, 1222 Borden, 2763 Meyer, *B. S.* 32860, 32764 Ramos, 26843 Edaño, 26372, 26341 Ramos & Edaño, Merrill 3112, Williams 542. On forested slopes at low altitudes. Endemic.

CLAOXYLON PURPUREUM Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 204, 5 (1910) Bot. 357; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 121.

Luzon (Ifugao, Kalinga, Lepanto, Bontoc, Benguet). Common in the mossy forest, altitude 1,700 to 2,400 m. Endemic.

CLAOXYLON SPATHULATUM Pax & K. Hoffm. in Engl. Pflanzenreich 63 (1914) 120.

Luzon (Camarines), *Ahern* 266. Endemic.

CLAOXYLON SUBVIRIDE Elm. Leaflet. Philip. Bot. 3 (1910) 907; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 118.

Claoxylon longifolium Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 117, p. p., quoad Philip.

Luzon (Tayabas), Mindoro, Sibuyan, Panay, Leyte, Samar, Mindanao, (Lanao, Zamboanga), *Elmer* 12374, *F. B.* 3666, 4364, 4332, 4329, 8620, 12084 Merritt, Merrill 5619, *B. S.* 24506, 24210 Ramos, 30908, 30833, 31333 Ramos & Edaño, Wenzel 356, Clemens 869, 1131. In primary forests at low and medium altitudes. Endemic.

Local names: Bilid-bilid (Sul.); kurong (S. L. Bis.).

EXCLUDED SPECIES

CLAOXYLON INDICUM Hassk.; F.-Vill. Novis. App. (1880) 193; Vidal Sinopsis Atlas (1883) 38, t. 83, f. D.

The form figured by Vidal is probably referable to *C. brachyandrum* Pax & Hoffm.

CLAOXYLON MARIANUM Muell.-Arg.; F.-Vill. l. c.

CLAOXYLON WALLICHIANUM Muell.-Arg.; F.-Vill. l. c.

24. TREWIA Linnaeus

TREWIA NUDIFLORA Linn. Sp. Pl. (1753) 1193; Muell.-Arg. in DC. Prodr. 15² (1866) 953; Baill. Étud. Gén. Euphorb. (1858) 409, t. 18, f. 18-23; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 140, t. 31, f. F, G.

Mallotus cardiophyllus Merr. in Philip. Journ. Sci. 7 (1912) Bot. 398.

Luzon (Cagayan), *Cuming* 1267, apparently very rare or local. India and Ceylon to Siam, Hainan, Sumatra, and Java; a conotypic genus.

25. MELANOLEPIS Reichenbach f. and Zollinger

MELANOLEPIS MULTIGLANDULOSA (Reinw.) Reichb. f. & Zoll. in Linnaea 28 (1856) 324; Merr. Interpret. Herb. Amb. (1917) 318, Sp. Blancoanae (1918) 223.

Croton multiglandulosus Reinw. ex Blume Cat. Gew. Buitenz. (1823) 105.

Rottlera multiglandulosa Blume Bijdr. (1825) 609.

Mallotus moluccanus Muell.-Arg. in Linnaea 34 (1865) 185, DC. Prodr. 15² (1866) 958; F.-Vill. Novis. App. (1880) 194; Vidal Sinopsis Atlas (1883) 39, t. 84, f. A, Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 245; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 31, Philip. Journ. Sci. 1 (1906) Suppl. 79, 3 (1908) Bot. 416, 7 (1912) Bot. 401, Fl. Manila (1912) 292; Elm. Leaf. Philip. Bot. 4 (1911) 1297, non *Croton moluccanus* Linn.

Adelia monoica Blanco Fl. Filip. ed. 2 (1845) 561, ed. 3, 3 (1879) 224, t. 218.

Melanolepis moluccana Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 142, non *Croton moluccanus* Linn.

Mallotus calcosus Muell.-Arg. in DC. Prodr. 15² (1866) 958; F.-Vill. Novis. App. (1880) 194.

Throughout the Philippines from Batan Islands to Mindanao, Sulu, and Palawan. Common in thickets and second-growth forests at low and medium altitudes. Indo-China to Formosa, Sumatra, Java, Borneo, New Guinea, and the Marianne Islands.

Local names: Aém (Ting.); ahém (Iv.); alám (Ilk.); além (Ilk.); alím (Tag., P. Bis.); alúm (Bik., Tagb., P. Bis., Sul., Mag.); arúm (P. Bis.); alíng (Bik.); ayum-ayum (Sbl.); galum (Sub.); girañgan (Tagb.); pakakal (Tag.).

Croton moluccanus Linn. is in part *Givotia rottleriformis* Griff. and in part *Aleurites moluccana* Willd., hence this specific name is not available for the present species. The specimen in the Linnean herbarium was not there in 1752 and does not appear until the 1767 enumeration.

Var. **PENDULA** (Merr.).

Mallotus moluccanus Muell.-Arg. var. *pendulus* Merr. in Philip. Journ. Sci. 7 (1912) Bot. 401.

Melanolepis moluccana Pax & Hoffm. var. *pendula* Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) Bot. 144.

Palawan, Mindanao, Merrill 8305, 11528. In thickets at low altitudes. Endemic.

26. MALLOTUS Loureiro

MALLOTUS AURICULATUS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 396; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 194.

Leyte, Negros, Panay, Mindanao (Agusan, Lanao, Davao), F. B. 7271, 7259 Everett, 21972 Hinolan, Wenzel 589, 600, 701, 1040, Elmer 11278, 13671, 13394, Clemens 1013, B. S. 30828, 31458, 31371 Ramos & Edaña. In primary forests at low and medium altitudes. Endemic.

Local names: Apanang (Mbo.); gaugau (Mbo.); kamanian (Mbo.); mala-mala P. Bis.).

MALLOTUS BREVIPES Merr. in Philip. Journ. Sci. 9 (1914) 487; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 19.

Mindanao (Davao, Cotabato), F. B. 27500 De Mesa, 14246 Tarrosa, 18270 Miranda, Williams 2968. On forested slopes at low and medium altitudes. Endemic.

Local name: Talag (Mag.).

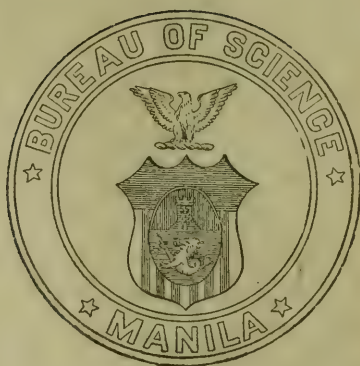
AN ENUMERATION OF PHILIPPINE FLOWERING PLANTS

BY

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EXPLANATORY NOTE

The present enumeration is an attempt to summarize in convenient form for consultation our present knowledge of Philippine flowering plants, and represents a part of the knowledge accumulated by the author during a course of about twenty years' study of the problem. In the work an attempt has been made to account for all binomials accredited to the Philippine flora; to adjust the synonymy when necessary; to include all important references to the Philippine botanical literature and essential references to extra-Philippine literature; to give the habitat, altitudinal range, and Philippine and extra-Philippine distribution of each species; to cite illustrative specimens where expedient or necessary; and to record all available local names for each species.

It is proposed to issue the present work in fascicles, utilizing one volume for the gymnosperms and the monocotyledons and two volumes for the dicotyledons. It is planned to publish full introductory and explanatory matter in a general introduction to be prefixed to Volume 1 when the entire enumeration is completed.

ELMER D. MERRILL.

MANILA, P. I., August 25, 1921.

MALLOTUS CAULIFLORUS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 399; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 196.

Luzon (Cagayan, Camarines), *B. S. 13909 Ramos, 33960 Ramos & Edaño, F. B. 17794 Curran*. In primary forests at low altitudes. Endemic.

MALLOTUS CONFUSUS Merr. in Philip. Journ. Sci. 16 (1920) 559.

Mallotus barbatus Merr. in Philip. Journ. Sci. 7 (1912) Bot. 397, non Muell.-Arg.

Luzon (Tayabas, Camarines), Samar, Mindanao (Davao), *Whitford 711, B. S. 29153, 33896 Ramos & Edaño, Merrill Phil. Pl. 1650*. In second-growth forests at low altitudes. Endemic.

MALLOTUS ECHINATUS Elm. Leaf. Philip. Bot. 3 (1910) 925; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 204.

Mallotus pseudopenangensis Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 203.

Luzon (Cagayan, Ilocos Norte, Bataan, Camarines, Albay), Mindoro, Sibuyan, Panay, Mindanao (Zamboanga), *Elmer 12253, B. S. 7396, 7381, 7425, 33024 Ramos, 33546 Ramos & Edaño, 35378, 35532, 35326 Martelino & Edaño, F. B. 2612 Meyer, 6821 Merritt, 28766 Bautista*. In forests at low and medium altitudes. Endemic.

Local names: Beli (C. Bis.); burobulála (Bik.); kolokádios (P. Bis.).

MALLOTUS FLORIBUNDUS (Blume) Muell.-Arg. in Linnaea 34 (1865) 173, DC. Prodr. 15² (1866) 962; Hook. f. Fl. Brit. Ind. 5 (1887) 432; Rolfe in Journ. Bot. 23 (1885) 215; Vidal Phan. Cuming. Philip. (1886) 245; Elm. Leaf. Philip. Bot. 4 (1911) 1297; Pax & K. Hoffm. in Engl. Pflanzenreich 63 (1914) 173, f. 26, A.

Adisca floribunda Blume Bijdr. (1825) 610.

Luzon (Tayabas, Camarines, Sorsogon), Mindoro, Palawan, Masbate, Biliran, Samar, Leyte, Negros, Mindanao, Basilan. In forests at low and medium altitudes, locally abundant; the dried specimens have a very characteristic odor. Tenasserim through Malaya to Celebes, a variety in New Guinea.

Local names: Bagnan (Tagb.); batalang (Bag.); katúla (Sub.); kayog (Mbo.); tula-túla (Tag., Bik., P. Bis., Tagb., Chab., Sul.); tuyá-túya (Tag.).

MALLOTUS KORTHALSII Muell.-Arg. in DC. Prodr. 15² (1866) 976; Merr. in Philip. Journ. Sci. 4 (1910) Bot. 283; Elm. Leaf. Philip. Bot. 3 (1910) 924; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 158.

Luzon (Cagayan, Tayabas, Camarines), Samar, Leyte, Sibuyan, Panay, Mindanao (Lanao, Zamboanga), *F. B. 17072 Curran, 23743 Alvarez, 23142, 25903 Alvier, B. S. 13245, 17627 Ramos, 25547 Yates, 31104, 36872, 36788, 36928 Ramos & Edaño, Elmer 12348, Wenzel 1726*. In forests at low altitudes. Borneo, Celebes.

Local names: Balában (Ibn.); banatong-putí (Tag.); katúba (Sub.); tuba-túba (Tag.).

MALLOTUS LACKEYI Elm. Leaf. Philip. Bot. 4 (1911) 1298; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 176.

Mallotus sanchezii Merr. in Philip. Journ. Sci. 7 (1912) Bot. 402.

Palawan, Leyte, Mindanao (Misamis, Zamboanga), Tawitawi, *Elmer 13017, Merrill 9509, Wenzel 81, Quadras, F. B. 21875 Villamil*. In primary forests at low altitudes, ascending to 600 m. Borneo.

MALLOTUS LEUCOCALYX Muell.-Arg. in DC. Prodr. 15² (1866) 970; F.-Vill. Novis. App. (1880) 195; Vidal Rev. Pl. Vasc. Filip. (1886) 245; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 150.

Luzon (Bataan, Tayabas, Laguna, Camarines, Sorsogon), Palawan, Balabac, Negros, Mindanao (Lanao, Zamboanga), Basilan, *Wilkes Expedition, Merrill 8161, Elmer 17866, 15137, 16548, B. S. 20871 Escritor, 22916 McGregor, 14977 Ramos, F. B. 23814 Mabesa, 4319 Everett, 28674 Pascual, 28729 Simeon*. In thickets and second-growth forests at low altitudes. Malay Peninsula, Celebes.

MALLOTUS LONGISTYLUS Merr. in Philip. Journ. Sci. 16 (1920) 560.

Dinagat, *B. S. 35173 Ramos & Pascasio*. In forests at low altitudes. Endemic.

MALLOTUS MIQUELIANUS (Scheff.) Boerl. Handl. Fl. Nederl. Ind. 3 (1900) 290; Pax & K. Hoffm. in Engl. Pflanzenreich 63 (1914) 200. *Rottlera miqueliana* Scheff. in Ann. Mus. Bot. Lugd.-Bat. 4 (1868-69) 124.

Mallotus anisophyllus Hook. f. Fl. Brit. Ind. 5 (1887) 436; Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 107; Elm. Leaf. Philip. Bot. 4 (1911) 1296.

Mindoro, Palawan, *Merrill 4045, 7239, 9569, Phil. Pl. 1246, 2096, Elmer 12817, F. B. 6795, 11406 Merritt, B. S. 787, 820 Foxworthy*. In primary forests at low altitudes. Malay Peninsula, Borneo.

MALLOTUS ODORATUS Elm. Leaf. Philip. Bot. 4 (1911) 1299; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 176.

Mallotus alternifolius Merr. in Philip. Journ. Sci. 7 (1912) Bot. 395.

Mallotus camiguinensis Merr. op. cit. 397.

Babuyan Islands (Camiguin), Palawan, *B. S. 4047 Félix, 240, 250 Bermejos, Merrill Phil. Pl. 1231, Elmer 12584, F. B. 3905, 4124 Curran*. In dry primary forests at low altitudes. Endemic.

Local name: Somau (Tagb.).

MALLOTUS PANICULATUS (Lam.) Muell.-Arg. in Linnaea 34 (1865) 189, DC. Prodr. 15² (1866) 965; F.-Vill. Novis. App. (1880) 195; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 400, 11 (1916) Bot. 283.

Croton paniculatus Lam. Encycl. 2 (1786) 207.

Mallotus cochinchinensis Lour. Fl. Cochinch. (1790) 635; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 166.

Croton appendiculatus Elm. Leaf. Philip. Bot. 1 (1908) 312.

Luzon (Tayabas, Laguna, Camarines, Sorsogon), Leyte, Negros, Cebu, Mindanao. In forests at low and medium altitudes. Burma to southern China, southward through Malaya to tropical Australia.

Local names: Anaplan (Buk.); hinlaumó (P. Bis.); lamai (Bag.).

MALLOTUS PAPILLARIS (Blanco) Merr. in Philip. Journ. Sci. 7 (1912) Bot. 238, Fl. Manila (1912) 294, Sp. Blancoanae (1918) 223.

Adelia papillaris Blanco Fl. Filip. ed. 2 (1845) 562, ed. 3, 3 (1879) 225, t. 381; Muell.-Arg. in DC. Prodr. 15² (1866) 731.

Luzon (Pampanga, Rizal, Batangas, Bulacan), *Merrill 2720, Phil. Pl. 434, Sp. Blancoanae 50, B. S. 1417, 3324 Ramos, F. B. 1110 Ahern's collector*. In dry thickets at low altitudes; erroneously reduced by Pax and Hoffmann to *M. tiliifolius* Muell.-Arg., a strictly littoral species. Endemic. Local names: Kutulan (Tag.); takip-asin-laláki (Tag.).

MALLOTUS PAPUANUS (J. J. Sm.) Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 202; Merr. in Philip. Journ. Sci. 16 (1920) 560.

Mallotus hookerianus Muell.-Arg. var. *papuanus* J. J. Sm. in Nova Guinea 8 (1912) 787, t. 137.

Mallotus hirsutus Elm. Leaf. Philip. Bot. 8 (1915) 2648.

Mindanao (Surigao, Agusan), *Elmer 13480, B. S. 34549 Ramos & Pascasio*. In primary forests, ascending to 1,200 m. New Guinea, but perhaps not distinguishable from the Chinese *M. hookerianus* Muell.-Arg.

Local name: Masañgauai (Mbo.).

MALLOTUS PHILIPPENSIS (Lam.) Muell.-Arg. in Linnaea 34 (1865) 196, DC. Prodr. 15² (1866) 980; F.-Vill. Novis. App. (1880) 195; Vidal Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 245; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 79, 3 (1908) Bot. 416, Fl. Manila (1912) 294; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 184 (all as *philippinensis*).

Croton philippense Lam. Encycl. 2 (1786) 206.

Echinus philippinensis Baill. Adansonia 6 (1866) 314.

Rottlera philippinensis Scheff. in Ann. Mus. Bot. Lugd.-Bat. 4 (1868-69) 124.

Rottleria manilensis Klotz. ex Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 184, in syn.

Throughout the Philippines, common in thickets and second-growth forests at low altitudes. India to southern China and Formosa, southward to New South Wales.

Local names: Apúyot (Sul.); banató (Ibn., Ig., Tag.); buás (Ilk.); darandáng (Tag.); panagísen (Ibn.); panagísian (Neg.); panagísien (Ibn., Klg.); pañgaplásin (Ilk.); pikal (Sbl.); sala (Tag., Bis.); tafú' (Ibn.); tagusála (P. Bis.) tutúla (Tagb.).

MALLOTUS REPANDUS (Willd.) Muell.-Arg. in Linnaea 34 (1865) 197, DC. Prodr. 15² (1866) 981; Hook. f. Fl. Brit. Ind. 5 (1887) 442; F.-Vill. Novis. App. (1880) 195; Vidal Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 245; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 80, Sp. Blancoanae (1918) 223; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 181.

Croton repandus Willd. in Neue Schrift. Naturf. Freunde 4 (1803) 206.

Croton volubilis Llanos in Mem. Acad. Cienc. Madr. 4 (1856) 503; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 103.

Throughout the Philippines in thickets and second-growth forests at low altitudes. India to southern China and Formosa, southward through Malaya to New Caledonia and northeastern Australia.

Local names: Malasiat (Tag.); marakarmái (Ilk.); panuálan (Tag.); sikír (Ilk.).

MALLOTUS RESINOSUS (Blanco) Merr. Sp. Blancoanae (1918) 222.

Adelia resinosa Blanco Fl. Filip. ed. 2 (1845) 562, ed. 3, 3 (1879) 225 saltem pro majore parte; Muell.-Arg. in DC. Prodr. 15² (1866) 731.

Claoxylon muricatum Wight Ic. (1852) t. 1886.

Croton muricatus Heyne in Wall. Cat. (1847) No. 7751, *nomen nudum*.

Mallotus muricatus Muell.-Arg. in Linnaea 34 (1865) 191, DC. Prodr. 15¹ (1866) 972; F.-Vill. Novis. App. (1880) 195; Vidal Phan.

Cuming, Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 246; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 79; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 190 (var. *walkeræ* Pax & Hoffm.).

Luzon (Cagayan to Sorsogon), Mindoro, Balabac, Masbate, Mindanao, Basilan. Common in second-growth forests at low altitudes. Ceylon, Andaman Islands, Malay Peninsula, Sumatra, Java, Celebes, Timor, Key.

Local names: Dampil (Tag.); gitisan (Tag.); kabkabron (Ilk.); kanút (Ilk.); mapilpil (Tag.); mata-mata (Bik.); panalayápen (Ilk.); salsalagáw (Ilk.); tansian (Tag.); tara (Biln.).

MALLOTUS-RICINOIDES (Pers.) Muell.-Arg. in Linnaea 34 (1865) 187, DC. Prodr. 15² (1866) 963; Hook. f. Fl. Brit. Ind. 5 (1887) 430; F.-Vill. Novis. App. (1880) 194; Vidal Phan. Cuming, Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 245; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 78, Philip. Journ. Sci. 1 (1906) Suppl. 80, 3 (1908) Bot. 417, 5 (1910) Bot. 357, Sp. Blancoanae (1918) 221; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 170.

Croton ricinoides Pers. Syn. 2 (1807) 586.

Croton mollissimus Geisel. Croton Monogr. (1807) 73.

Rottlera ricinoides A. Juss. Euphorb. Tent. (1824) 33, t. 9, f. 29a; Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 420.

Adelia bernardia Blanco Fl. Filip. (1837) 814, non Linn.

Adelia barbata Blanco op. cit. ed. 2 (1845) 561, ed. 3, 3 (1879) 223, p. p.

Throughout the Philippines, usually very common in second-growth forests at low altitudes, ascending to 2,200 m. Tenasserim, through Malaya to New Guinea and northeastern Australia.

Local names: Adufi (Ig.); alítap (Ig.); amonumo (P. Bis.); anitap (Ig.); balbál (Ibn.); belbél (Ting.); bilos (Pamp.); bulbul (Ting.); dapulan (Sul., Bag.); fagon (Bon.); gaga (Tag.); gapas-gápas (Sul.); hanonúmo (C. Bis.); hinlaámo (P. Bis.); hinlaúmu (P. Bis.); hinonómo (C. Bis.); lamutiukan (Tagb.); malahúmo (P. Bis.); nagun (Mand.); pakalkal (Pamp.); papud (Sul.); pilipud (C. Bis.); tambon-tambon (Tag.); tapit (Bik.); takip-asin (Tag.); tabogor (Tag.); unlaomu (P. Bis.); vanáti (Iv.).

MALLOTUS TILIIFOLIUS (Blume) Muell.-Arg. in Linnaea 34 (1865) 190, DC. Prodr. 15² (1866) 969; J. J. Sm. in Koord. & Val. Bijdr. Boom. Java 12 (1910) 443; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 148, f. 22, D; Merr. Interpret. Herb. Amb. (1917) 318.

Rottlera tiliifolia Blume Bijdr. (1825) 607.

Croton tiliifolius Lam. var. *aromaticus* Lam. Encycl. 2 (1786) 206, quoad syn. Rumph.

Rottlera acuminata A. Juss. Euphorb. Tent. (1824) 33, non *Mallotus acuminatus* K. Schum., nec Muell.-Arg.

Mallotus playfairii Hemsl. in Journ. Linn. Soc. Bot. 26 (1894) 441; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 80, 3 (1908) Bot. 416; Elm. Leaf. Philip. Bot. 3 (1910) 924.

Throughout the Philippines in thickets along the seashore, never inland. Formosa to Sumatra, New Guinea, northeastern Australia, and Samoa.

Local names: Alai (Tag.); briki (Bag.); gapas-gápas (Bik.); mahotai (C. Bis.); palu-baliskad (C. Bis.); sala (Tag.).

DOUBTFUL SPECIES

MALLOTUS DISPAR Muell.-Arg.; F.-Vill. Novis. App. (1880) 195.

MALLOTUS MACROSTACHYUS Muell.-Arg.; F.-Vill. l. c.

MALLOTUS MORITZIANUS Muell.-Arg.; F.-Vill. l. c.

MALLOTUS SUBPELTATUS Muell.-Arg.; F.-Vill. l. c.

MALLOTUS ZOLLINGERI Muell.-Arg.; F.-Vill. l. c.

MALLOTUS ROXBURGHIANUS Muell.-Arg.; Usteri Beitr. Ken. Philip. Veg. (1905) 126.

This species is known only from India; it is suspected that Usteri's specimen is *Mallotus floribundus* Muell.-Arg.

27. NEOTREWIA Pax and Hoffmann

NEOTREWIA CUMINGII (Muell.-Arg.) Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 212, f. 31, A-E.

Mallotus cumingii Muell.-Arg. in Linnaea 34 (1866) 195, DC. Prodr. 15² (1866) 978; Vidal. Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 245; F.-Vill. Novis. App. (1880) 195; Koord. in Meded. Lands Plant. 19 (1898) 587.

Trewia ambigua Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 79.

Mallotus pinnatinervius Elm. ex Pax & Hoffm. l. c. in syn.

Luzon (Cagayan to Sorsogon), Mindoro, Samar, Leyte, Masbate, Panay, Negros, Cebu, Mindanao (incl. *Elmer 16131* as *N. arborea* Elm.). In thickets and forest at low and medium altitudes, often common. A monotypic genus, also in Celebes, *Koorders 16962!*, *16964!*

Local names: Apanang (S. L. Bis., Buk.); bato-bató (Tag.); bilis (Sul.); burilis (C. Bis.); kabantala (Bag.); malasuite (Tag.); matobató (P. Bis.); pamasilién (Ilk.); panghánġin (Neg.); patian (C. Bis.); tabunghian (C. Bis.).

28. WETRIA Baillon

WETRIA MACROPHYLLA (Blume) J. J. Sm. in Meded. Dept. Landbouw 10 (1910) 471; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 219; Merr. in Philip. Journ. Sci. 16 (1920) 561.

Trewia macrophylla Blume Bijdr. (1825) 612.

Wetria trewioides Baill. Étud. Gén. Euphorb. (1858) 409.

Pseudotrewia macrophylla Miq. Fl. Ind. Bat. 1² (1859) 414.

Alchornea blumeana Muell.-Arg. in Linnaea 34 (1865) 167, DC. Prodr. 15² (1866) 900.

Agrostistachys pubescens Merr. in Philip. Journ. Sci. 4 (1909) Bot. 274; Pax in Engl. Pflanzenreich 57 (1912) 99.

Luzon (Bataan), Bancalan, Negros, *F. B.* 5940 Curran, 23450 Sherfesece & Alambra, 23871 Cardona, Weber. On slopes, bamboo thickets and primary forests at low altitudes. Borneo, Sumatra, Java; a monotypic genus.

29. ALCHORNEA Swartz

ALCHORNEA PARVIFLORA (Benth.) Muell.-Arg. in Linnaea 34 (1865) 168, DC. Prodr. 15² (1866) 902; F.-Vill. Novis. App. (1880) 194; Vidal Phan. Cuming. Philip. (1885) 144; Rev. Pl. Vasc. Filip. (1886) 244; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 382.

Stipellaria parviflora Benth. in Hook. Journ. Bot. Kew Miscel. 6 (1854) 4.

Acalypha tiliaefolia Vidal Rev. Pl. Vasc. Filip. (1886) 244, sphalm.

Alchornea tiliaefolia Ceron Cat. Pl. Herb. Manila (1892) 154, non Muell.-Arg.

Alchornea sicca Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 251, non Merr.

Luzon (Bulacan, Rizal), Palawan, Leyte, Negros, *Cuming* 1800, *B. S.* 5220 Ramos, 34079 Ramos & Edaña, *Merrill* 9596, 9572, *Phil. Pl.* 2095, *Loher* 6843, *Wenzel* 359. In second-growth forests and thickets at low and medium altitudes. Endemic.

ALCHORNEA PUBESCENS Merr. in Philip. Journ. Sci. 20 (1922) 399.

Luzon (Cagayan), *F. B.* 22724 Castillo. On forested slopes at low altitudes. Endemic.

ALCHORNEA RUGOSA (Lour.) Muell.-Arg. in Linnaea 34 (1865) 170, DC. Prodr. 15² (1866) 905; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 243; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 383, Sp. Blancoanae (1918) 225; Elm. Leaf. Philip. Bot. 4 (1911) 1273.

Cladodes rugosa Lour. Fl. Cochinch. (1790) 574.

Conseveibum javanense Blume Bijdr. (1826) 614.

Alchornea javensis Muell.-Arg. in Linnaea 34 (1865) 170, DC. Prodr. 15² (1866) 905; F.-Vill. Novis. App. (1880) 194; Vidal Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 244; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 31, Govt. Lab. Publ. (Philip.) 27 (1905) 77, Philip. Journ. Sci. 1 (1906) Suppl. 80.

Adelia glandulosa Blanco Fl. Filip. (1837) 814.

Tragia innocua Blanco op. cit. ed. 2 (1845) 479, ed. 3, 3 (1879) 94, non Linn.

Alchornea villosa F.-Vill. Novis. App. (1880) 194, non Muell.-Agr.

Alchornea hainanensis Pax & Hoffm. op. cit. 242.

Babuyan Islands and northern Luzon to Palawan, Balabac, and Mindanao. Common in thickets, second-growth forests, etc., at low and medium altitudes. Burma to southern China through Malaya to Timor and New Guinea.

Local names: Aguyui (Tag.); banauli (S. L. Bis.); gasugási (Sul.); gaugáu (C. Bis.); halum (Sul.); kanáuai (Tag.); limo (Tagb.); malam-biñgon (Sul.); tayán (Tag.).

ALCHORNEA SICCA (Blanco) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 192, Fl. Manila (1912) 297, Sp. Blancoanae (1918) 224.

Excoecaria sicca Blanco Fl. Filip. (1837) 787, ed. 2 (1845) 542, ed. 3, 3 (1879) 193, t. 307.

Croton drupaceum Blanco l. c. ed. 2 (1845) 519, ed. 3, 3 (1879) 155, non Roxb.

Alchornea mollis F.-Vill. Novis. App. (1880) 194, non Muell.-Arg.

Alchornea philippinensis Pax & K. Hoffm. in Engl. Pflanzenreich 63 (1914) 249.

Luzon (Pangasinan, Pampanga, Rizal, Manila, Laguna), Merrill 4100, Sp. Blancoanae 642, Phil. Pl. 988, Loher 4667, Didricksen 3146, Warburg 13629, 13630. In thickets along small streams at low altitudes. Endemic.

Local name: Balánti (Tag.).

EXCLUDED SPECIES

ALCHORNEA BLUMEANA Muell.-Arg.; F.-Vill. Novis. App. (1880) 194.

ALCHORNEA CUNEIFOLIA Muell.-Arg.; F.-Vill. l. c.

30. CLEIDION Blume

CLEIDION LANCEOLATUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 474; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 23.

Samar, Phil Pl. 1648 Merrill, F. B. 21052 Sherfesse, Cenabre, & Cortes. In thickets along streams at low altitudes. Endemic.

Local name: Dagumái (S. L. Bis.).

CLEIDION RAMOSII (Merr.) Merr. in Philip. Journ. Sci. 20 (1922) 400.

Mallotus ramosii Merr. in Philip. Journ. Sci. 7 (1912) Bot. 401; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 195.

Mallotus samarensis Merr. op. cit. 9 (1914) Bot. 488; Pax & Hoffm. op. cit. 68⁴ (1919) 18.

Mindoro, Samar, Camiguin de Misamis, Siargao, B. S. 14602, 17480, 35031, 34829, 39395, 39408 Ramos, 35031, 34829 Ramos & Pascasio. In forests at low and medium altitudes, ascending to 1,000 m. Endemic.

CLEIDION SPICIFLORUM (Burm. f.) Merr. Interpret. Herb. Amb. (1917) 322 in nota, Sp. Blancoanae (1918) 225.

Acalypha spiciflora Burm. f. Fl. Ind. (1768) 203, t. 61, f. 2.

Cleidion javanicum Blume Bijdr. (1825) 613; Miq. Fl. Ind. Bat. 1² (1858-59) 409; Baill. Étud. Gén. Euphorb. (1858) 404, t. 9, f. 3-5; Muell.-Arg. in DC. Prodr. 15² (1866) 987; Hook. f. Fl. Brit. Ind. 5 (1887) 444; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 31; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 290, f. 47.

Lasiostylis salicifolia Presl Bot. Bemerk. (1844) 149.

Northern Luzon to Palawan and Mindanao. In most or all provinces and islands, in forests at low and medium altitudes. India and Ceylon through Malaya to New Guinea.

Local names: Agípos (Tag.); hantatampsi (C. Bis.); kayugkóg (Tag.); lapo-lápo (Ilk.); malagasába (Tag.); malatúba (Bik.); salígao (Tag., Ilk.); tayókan (Tag.).

31. MACARANGA Thouars

MACARANGA AMPLIFOLIA Merr. in Philip. Journ. Sci. 7 (1912) 392; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 317.

Luzon (Cagayan, Laguna, Tayabas), Bucas Grande, *B. S.* 13513, 20427 Ramos, 35146 Ramos & Pascasio, 28859 Ramos & Edaña, *F. B.* 26977 Velasco, 10153 Curran. In damp primary forests at low altitudes. Endemic.

MACARANGA BALABACENSIS Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 368.

Balabac, *B. S.* 424 Mangubat. On forested slopes at low altitudes. Endemic.

Local name: Binahúlo (Sul.).

MACARANGA BICOLOR Muell.-Arg. in Linnaea 34 (1865) 199, DC. Prodr. 15² (1866) 1010; F.-Vill. Novis. App. (1880) 195; Vidal Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 246; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 31, Philip. Journ. Sci. 1 (1906) Suppl. 80; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 319.

Luzon (Cagayan, Apayao, Nueva Vizcaya, Bulacan, Bataan, Tayabas, Laguna, Camarines, Sorsogon), Mindoro, Polillo, Biliran, Leyte, Panay, Mindanao (incl. *Elmer* 17236, 14664 as *M. utilis* Elm.). In second-growth forests at low altitudes. Endemic.

Local names: Amilik (Bik.); amublít (Bis.); bagambáng (Tag.); baganbáng (Tag.); banigán (Neg.); bilua-laláki (Tag.); binón̄ga (Tag.); binún̄ga (Tag.); hamindán (Bis.); hamilig (Mbo.); konmantig (P. Bis.); tabong (P. Bis.); takip-asín (Tag.).

MACARANGA CAUDATIFOLIA Elm. Leaf. Philip. Bot. 2 (1908) 427; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 342.

Macaranga cuneata Elm. op. cit. 428.

Macaranga sibuyanensis Elm. op. cit. 3 (1910) 922.

Macaranga apoensis Elm. op. cit. 7 (1915) 2646; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 27.

Sibuyan, Leyte, Panay, Negros, Samar, Camiguin de Misamis, Mindanao (Davao), Tinago, *Elmer* 9652, 9483, 10719, 12264, *Merrill Phil. Pl.* 2045, *Wenzel* 648, 898, *B. S.* 31180 Ramos & Edaña, *F. B.* 28251 Mataya, 28240 Fernando. In forests, deserted clearings, etc., ascending to 1,100 m; not always clearly distinguishable from *M. cumingii* Muell.-Arg. Endemic.

Local names: Dahá (C. Bis.); indang (Bag.).

MACARANGA CONGESTIFLORA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 282; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 310.

Palawan, *F. B.* 3590, 3591 Curran, *Merrill* 9365. In old clearings at low altitudes. Endemic.

MACARANGA CUERNOSENSIS Elm. Leaf. Philip. Bot. 2 (1908) 429; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 333.

Negros, Leyte, Panay, Camiguin de Misamis, Mindanao (Davao), *Elmer* 9549, 10109, 10155, 11257, *Wenzel* 757, *B. S.* 14488, 14654 Ramos, 30667 Ramos & Edaña. In forests at medium altitudes, ascending to 1,100 m. Endemic.

Local names: Bilánti-ihalas (C. Bis.); indang (Bag.).

MACARANGA CUMINGII (Baill.) Muell.-Arg. in DC. Prodr. 15² (1866) 1005; F.-Vill. Novis. App. (1880) 196; Vidal Rev. Pl. Vasc. Filip. (1886) 246, Phan. Cuming. Philip. (1885) 144; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 80 (*cumingiana*), 3 (1908) Bot. 417; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 342.

Mappa cumingii Baill. Étud. Gén. Euphorb. (1858) 430, *nomen nudum*.

Batan Islands, Luzon (Bontoc, Benguet, Zambales, Nueva Ecija, Bataan, Tayabas, Laguna, Camarines), Mindoro, *Cuming* 1100, *Elmer* 9197, 9112, *Loher* 4795, *B. S.* 3772 *Fénix*, 26254 *Ramos & Edaño*, 20578 *Ramos*, *F. B.* 10161 *Curran*, 21209 *Alvarez*. In thickets and forested ravines, ascending to an altitude of from 1,000 to 1,500 m. Endemic.

Local names: Anítap (Ig.); baiákot (If.); sarik-sarik (Neg.); vanáti (Iv.).

MACARANGA DIPTEROCARPIFOLIA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 205, 5 (1910) Bot. 357; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 338.

Luzon (Abra, Benguet, Apayao, Tayabas, Nueva Ecija, Laguna, Bataan, Camarines, Sorsogon), Cebu, *Merrill Phil. Pl.* 1724, *Elmer* 6187, 17943, 15231, 16654, *B. S.* 12594, 28107 *Fénix*, 19545 *Ramos*, 29040, 26234 *Ramos & Edaño*. In primary forests and in forested ravines, altitude 400 to 1,300 m. Formosa, Botel Tobago.

Local names: Anítap (Ig.); balúmti (Ting.); binúnga-pulá (C. Bis.).

MACARANGA GIGANTIFOLIA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 391; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 318.

Camiguin de Misamis, Mindanao (Zamboanga), *B. S.* 14702 *Ramos*, 36739 *Ramos & Edaño*. In forests or thickets, at low altitudes. Endemic.

Local name: Buñgabong (Sub.).

MACARANGA GRANDIFOLIA (Blanco) Merr. in Philip. Journ. Sci. 7 (1912) Bot. 394, Fl. Manila (1912) 295, Sp. Blancoanae (1918) 226. *Croton grandifolius* Blanco Fl. Filip. (1837) 753, ed. 2 (1845) 518, ed. 3, 3 (1879) 153.

Macaranga mappa F.-Vill. Novis. App. (1880) 195; Vidal Rev. Pl. Vasc. Filip. (1886) 246, Phan. Cuming. Philip. (1885) 144, Sinopsis Atlas (1883) 39, t. 84, f. D; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 78, Philip. Journ. Sci. 1 (1906) Suppl. 80; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 320, f. 54 A!, non Muell.-Arg. [Muell.-Arg. in DC. Prodr. 15² (1866) 1000, quoad syn. Blanco], non *Ricinus mappa* Linn. [cf. Merr. Interpret. Herb. Amb. (1917) 319].

Macaranga portea E. André in Rev. Hort. 60 (1888) 176, f. 36; Hook. f. in Curtis's Bot. Mag. III 51 (1895) t. 7407; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 328.

Luzon (Cagayan, Benguet, Union, Nueva Vizcaya, Pangasinan, Bataan, Rizal, Batangas, Laguna, Tayabas), Mindoro. In second-growth forests at low altitudes, locally abundant. Endemic.

Local names: Abing-ábing (Tag.); biluak (Tag.); biláun (Tag.); binúang (Tag.); bongábong (Bis.); bilúra (Tag.); bingábing (Tag.); ginábang (Ilk.); ginábang-a-dakkél (Ilk.); hinoso (Tag.); kinábang (Ig.).

MACARANGA HISPIDA (Blume) Muell.-Arg. in DC. Prodr. 15² (1866) 990; Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 36, Philip. Journ. Sci. 2 (1907) Bot. 278, Interpret. Herb. Amb. (1917) 320; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 336, f. 61, A-C; Elm. Leaf. Philip. Bot. 4 (1911) 1295.

Mappa hispida Blume Bijdr. (1825) 624.

Rottlera hispida Kurz ex Teysm. & Binn. in Nat. Tijdschr. Nederl. Ind. 24 (1864) 43.

Tanarius hispidus O. Kuntze Rev. Gen. Pl. (1891) 620.

Macaranga rotundifolia Elm. ex Pax & Hoffm. l. c. in syn.

Luzon (Tayabas, Laguna, Camarines, Sorsogon), Mindoro, Palawan, Catanduanes, Samar, Leyte, Panay, Negros, Camiguin de Misamis, Mindanao, Basilan, Jolo. Common in second-growth forests, ravines, etc., at low and medium altitudes. Ceram, Amboina.

Local names: Alimbúnga (Chab.); bula-bula (Tagb.); don (Sub.); hamindáng (Bik., Sul., Tag.); hídang (Buk.); lagápak (Tag.); limbúnga (Sul.); tamíndan (P. Bis.).

MACARANGA LEYTENSIS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 393; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 393.

Leyte, *B. S. 15253* Ramos. On forested slopes. Endemic.

MACARANGA LOHERI Elm. Leaf. Philip. Bot. 2 (1908) 423; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 341, f. 55.

Luzon (Benguet), *Elmer 8558*, *Merrill Phil. Pl. 829, 1760, F. B. 22909* Leaño. In forested ravines, altitude 1,000 to 1,500 m. Endemic.

Local name: Anítap (Ig.).

MACARANGA MONTANA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 394, non Pax & Hoffm. (1914).

Macaranga merrilliana Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 334.

Mindanao (Zamboanga), *Merrill 8076*. On forested ridges, altitude about 1,000 m. Endemic.

MACARANGA NOBLEI Elm. Leaf. Philip. Bot. 2 (1910) 678; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 317.

Mindanao (Agusan, Zamboanga, Bukidnon, Davao), *Elmer 10816, 13358, B. S. 15755* Fénix, *37014* Ramos & Edaño, *F. B. 28210* Elmir. In forests along streams, altitude 700 to 1,000 m. Endemic.

Local names: Buṅgábong (Sub.); hamilig (Mbo.); limbúnga (Buk.); panilid (Bag.).

MACARANGA OVATIFOLIA Merr. in Philip. Journ. Sci. 16 (1920) 562.

Mindanao (Surigao), *B. S. 34683* Ramos & Pascasio. In forests along streams at low altitudes. Endemic.

MACARANGA RAMIFLORA Elm. Leaf. Philip. Bot. 2 (1908) 433; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 323.

Luzon (Bontoc, Tayabas), *Elmer 8108, B. S. 37981* Ramos & Edaño. In primary forests, altitude about 1,000 m. Endemic.

MACARANGA SYLVATICA Elm. Leaf. Philip. Bot. 2 (1908) 431.

Macaranga ramiflora Elm. var. *sylvatica* Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 324.

Negros, Leyte, *Elmer 9838, 10361, Wenzel 358, B. S. 15310 Ramos*. In primary forests, altitude 500 to 1,200 m. Endemic.

MACARANGA TANARIUS (Linn.) Muell.-Arg. in DC. Prodr. 15² (1866) 997 (var. *genuina* Muell.-Arg.); F.-Vill. Novis. App. (1880) 195; Vidal Sinopsis Atlas (1883) 39, t. 84, f. C., Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 246; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 31, Philip. Journ. Sci. 1 (1906) Suppl. 80, 3 (1908) Bot. 417, Fl. Manila (1912) 295, Interpret. Herb. Amb. (1917) 320; Elm. Leaf. Philip. Bot. 3 (1910) 923; Pax & K. Hoffm. in Engl. Pflanzenreich 63 (1914) 352.

Ricinus tanarius Linn. in Stickm. Herb. Amb. (1754) 14, Amoen. Acad. 4 (1759) 125, Syst. ed. 10 (1759) 1277, Sp. Pl. ed. 2 (1763) 1430.

Mappa tanarius Blume Bijdr. (1825) 624; Miq. Fl. Ind. Bat. 1² (1858-59) 401.

Throughout the Philippines, characteristic of thickets and second-growth forests at low and medium altitudes. This is the original form of the species, i. e., *Ricinus tanarius* Linn. of Amboina, with glabrous leaves, and includes *Elmer 14589, 14409* as *M. vulcanica* Elm. Andaman Islands and the Malay Peninsula to southern China and Formosa southward to north-eastern Australia.

Var. **TOMENTOSA** (Blume) Muell.-Arg. in DC. Prodr. 15² (1866) 997; Ceron Cat. Pl. Herb. Manila (1892) 155; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 31, Sp. Blancoanae (1918) 226.

Mappa tomentosa Blume Bijdr. (1825) 624; Miq. Fl. Ind. Bat. 1² (1858-59) 401; Elm. Leaf. Philip. Bot. 4 (1911) 1295.

Croton lacciferum Blanco Fl. Filip. (1837) 752, ed. 2 (1845) 715, ed. 3, 3 (1879) 153.

Range of the species; much commoner in the Philippines than is the typical form with glabrous leaves.

Local names: Alúṅgabun (Bag.); anabun (Bag.); bagámbang (Tag.); bilan (Pamp.); bilua (Pamp.); biluan (Tag.); biluan-laláki (Tag.); bilúṅga (Tag.); bíṅgua (Is.); binóṅga (Tag., Pamp., P. Bis.); binúan (Tagb.); binúang (Tag.); biṅgua (C. Bis.); binúṅga (Tag., Kuy., P. Bis.); binúṅgan (Tag.); binúan (Tagb.); gamú' (Ibn.); ginábang (Ting., Ig.); himindáng (Bik.); kinábang (Ig.); labauel (Ig.); lagau (C. Bis., Bag.); lagaon (Mbo.); ligabun (Mbo.); lungában (Tagk.); liṅgabúṅga (Sub.); lingbunga (Sul.); luṅgakan (Bag.); maasím (Tag.); mindang (Bik.); minúṅga (Tag., Bik., Mbo.); sabauil (Ilk.); samáet (Ibn.); samák (Ilk., Ting.); sámar (Ilk.); samúk (Ibn.).

MACARANGA TRILOBA (Reinw.) Muell.-Arg. in DC. Prodr. 15² (1866) 989; Hook. f. Fl. Brit. Ind. 5 (1887) 452; J. J. Sm. in Koord. & Val. Bijdr. Boom. Java 12 (1910) 504; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 380, f. 63, A-E.

Ricinus trilobus Reinw. ex Blume Cat. Gew. Buitenzorg (1823) 108.

Pachystemon trilobus Blume Bijdr. (1825) 626.

Palawan, *B. S.* 695 *Foxworthy*. On forested river banks, altitude about 1,000 m. Malay Peninsula, Sumatra, Java, Borneo.

32. CLADOGYNOS Zippel

CLADOGYNOS ORIENTALIS Zipp. ex Spanoghe in Linnaea 15 (1841) 349; Muell.-Arg. in DC. Prodr. 15² (1866) 384; J. J. Sm. in Koord. & Val. Bijdr. Boom. Java 12 (1910) 384; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 384; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 265, f. 41.

Cecveiba tomentosa Span. l. c.

Rottlera albicans Hassk. Hort. Bogor. (1844) 238.

Adenogynum discolor Reichb. f. & Zoll. in Verh. Nat. Vereen. Nederl. Ind. 1 (1856) 23, Linnaea 28 (1856) 325; Miq. Fl. Ind. Bat. 1² (1858-59) 400.

Chloradenia discolor Baill. Étud. Gén. Euphorb. (1858) 472, t. 19, f. 24, 25.

Cephalocroton albicans Muell.-Arg. in Linnaea 34 (1865) 155.

Cephalocroton discolor Muell.-Arg. in DC. Prodr. 15² (1866) 761.

Siquijor, Cebu, Merrill 7208, *B. S.* 11055 *Ramos*. In dry thickets at low altitudes. Cochinchina to Java and Timor.

33. ACALYPHA Linnaeus

ACALYPHA AMENTACEA Roxb. Fl. Ind. ed. 2, 3 (1832) 676; Merr. Interpret. Herb. Amb. (1917) 322, Sp. Blancoanae (1918) 226.

Acalypha amboynensis Benth. in Hook. Lond. Journ. Bot. 2 (1843) 233.

Acalypha grandis Muell.-Arg. var. *amboynensis* Muell.-Arg. in DC. Prodr. 15² (1866) 806.

Acalypha stipulacea Klotz. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 416; Muell.-Arg. in DC. Prodr. 15² (1866) 807; F.-Vill. Novis. App. (1880) 193; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 244; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 32, Govt. Lab. Publ. (Philip.) 27 (1905) 77, Philip. Journ. Sci. 1 (1906) Suppl. 81, 3 (1908) Bot. 417, 5 (1910) Bot. 357, Fl. Manila (1912) 293; Elm. Leaf. Philip. Bot. 4 (1911) 1275. *Acalypha affinis* Klotz. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 416.

Acalypha glandulosa Blanco Fl. Filip. (1837) 749, ed. 2 (1845) 516, ed. 3, 3 (1879) 149; Muell.-Arg. in DC. Prodr. 15² (1866) 888, non Cav.

Throughout the Philippines from the Babuyan Islands and northern Luzon to Palawan, Mindanao, and the Sulu Archipelago; common in thickets, old clearings, etc., at low and medium altitudes. Java and Borneo to New Guinea.

Local names: Alibágis (Tag.); arongdamói (Bik.); balinad (Tagb.); balindúd (Tagb.); baliñgód (Tag.); bogós (Bik., Tag.); bogús (Mbo., P. Bis.); bugós (Tag., Bik., C. Bis.); bugús (Bik.); bulúx (If.); danási (Sul.); lañgála (C. Bis., P. Bis.); lañganási (Lan., Buk.); malakbók (Tag.); masapsáp (Tag.); mogós (S. L. Bis.); sulínau (Tag.); ulínau (Tag.).

ACALYPHA ANGATENSIS Blanco Fl. Filip. (1837) 750, ed. 2 (1845) 516, ed. 3, 3 (1879) 150; Muell.-Arg. in DC. Prodr. 15² (1866) 805; F.-Vill. Novis. App. (1880) 193, Sp. Blancoanae (1918) 227.

Acalypha tomentosa Blanco Fl. Filip. (1837) 750, ed. 3, 3 (1879) 151; Muell.-Arg. in DC. Prodr. 15² (1866) 888, non Sw.

Acalypha grandis Muell.-Arg. var. *velutina* Muell.-Arg. in Flora 47 (1864) 441, DC. Prodr. 15² (1866) 608; Vidal Phan. Cuming. Philip. (1885) 143; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 357.

Batan Islands and northern Luzon to Mindanao. In thickets, chiefly at medium altitudes, ascending to 1,500 m. Formosa to Polynesia.

Local names: Bedús (Ig.); burnús (Bon.); bilús (Bon.); bulús (Bon.); boló (Ig.); bugós (Tag., Bis.); viús (Iv.).

ACALYPHA AUSTRALIS Linn. Sp. Pl. (1753) 1004; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 192.

Urtica gemina Lour. Fl. Cochinch. (1790) 682.

Acalypha gemina Muell.-Arg. in DC. Prodr. 15² (1866) 866.

Luzon (Cagayan), *B. S.* 7869, 7800 *Ramos*. In open places near streams and settlements. Manchuria and Japan to southern China and Formosa.

ACALYPHA BOEHMERIODES Miq. Fl. Ind. Bat. Suppl. (1861-62) 459; Muell.-Arg. in DC. Prodr. 15² (1866) 871; F.-Vill. Novis. App. (1880) 194; Merr. Fl. Manila (1912) 292.

Luzon (Ilocos Norte, Rizal, Manila, Laguna, Batangas), Mindanao, Basilan. In thickets, on old walls, etc., in and about towns at low altitudes. Java to Samoa.

ACALYPHA CATURUS Blume Bijdr. (1825) 629, excl. syn. Linn.; Muell.-Arg. in DC. Prodr. 15² (1866) 805; J. J. Sm. in Meded. Dept. Landbouw 10 (1910) 510.

Acalypha minahassae Koord. in Meded. Lands Plant. 19 (1898) 579, 624.

Acalypha similis Koord. l. c.

Acalypha cardiophylla Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 80.

Acalypha subcinerea Elm. Leaf. Philip. Bot. 7 (1915) 2631.

Luzon (Benguet, Bataan, Laguna, Cavite, Tayabas, Sorsogon), Samar, Leyte, Mindanao. In thickets and forests along streams at low and medium altitudes. Sumatra, Java, Borneo, Celebes.

Local names: Alum (Bag.); ambugtunong (C. Bis.); malasapsáp (Tag.); migtanong (Buk.); salimbugau (C. Bis.).

ACALYPHA GRANDIBRACTEATA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 191.

Batan and Babuyan Islands, *B. S.* 3607, 4084 *Fénix*, 3206 *Mearns*. In thickets at low altitudes; an ally of *A. amentacea* Roxb. Endemic.

Local name: Ahas (Iv.).

ACALYPHA HISPIDA Burm. f. Fl. Ind. (1768) 303, t. 61, f. 1; F.-Vill. Novis. App. (1880) 194; Merr. Fl. Manila (1912) 293, Interpret. Herb. Amb. (1917) 323.

Caturus spiciflorus Linn. Mant. 1 (1767) 127, non *Acalypha spiciflora* Burm. f.

Acalypha densiflora Blume Bijdr. (1826) 628.

Acalypha sanderi N. E. Br. in Gard. Chron. (1896) 2: 392.

Cultivated for ornamental purposes in Manila and in other large towns, but nowhere spontaneous; probably a native of southeastern Malaya, now cultivated in most tropical countries.

Local names: Perpón (Tag.); felpón (Sp.).

ACALYPHA INDICA Linn. Sp. Pl. (1753) 1003; Muell.-Arg. in DC. Prodr. 15² (1866) 868; F.-Vill. Novis. App. (1880) 194; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 244; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 417, Fl. Manila (1912) 292, Sp. Blancoanae (1918) 226.

Acalypha caroliniana Blanco Fl. Filip. (1837) 748, ed. 2 (1845) 515, ed. 3, 3 (1879) 149, t. 266, non Walt.

Throughout the Philippines, a weed in and about towns, in thickets, waste places, etc. Tropical Africa and Asia through Malaya to Polynesia.

Local names: Maraotóng (Ilk.); taptapíngar (Ilk.).

ACALYPHA WILKESIANA Muell.-Arg. in DC. Prodr. 15² (1866) 817; Merr. Fl. Manila (1912) 293.

Acalypha tricolor Seem. Fl. Vit. (1868) 225.

Commonly cultivated in Manila and other large towns for its variegated foliage, but nowhere spontaneous; introduced about 1905. A native of Polynesia, now cultivated in most tropical countries.

EXCLUDED SPECIES

ACALYPHA PILOSA Cav. Anal. Hist. Nat. 2 (1800) 136, Ic. 6 (1801) 47, t. 568, f. 2; Muell.-Arg. in DC. Prodr. 15² (1866) 814; F.-Vill. Novis. App. (1880) 194.

The type is evidently the tropical American plant, the Calauan, Luzon, specimen cited probably having been erroneously localized.

34. MEGISTOSTIGMA Hooker f.

MEGISTOSTIGMA CORDATUM Merr. in Philip. Journ. Sci. 16 (1920) 563.

Samar, B. S. 17591 Ramos. In dry forests at low altitudes. Endemic.

The only other known species is *M. malaccense* Hook. f., of the Malay Peninsula.

35. TRAGIA Linnaeus

TRAGIA HIRSUTA Blume Bijdr. (1825) 630; Muell.-Arg. in DC. Prodr. 15² (1866) 937; J. J. Sm. in Meded. Dept. Landbouw 10 (1910) 522.

Pachystylidium hirsutum Pax & Hoffm. in Engl. Pflanzenreich 68¹ (1919) 108.

Mindanao (Lanao), Clemens 606. Java.

Var. **IRRITANS** (Merr.).

Tragia irritans Merr. in Philip. Journ. Sci. 9 (1914) Bot. 491.

Pachystylidium hirsutum Pax & Hoffm. var. *irritans* Pax & Hoffm. l. c.

Luzon (Union, Bataan), Mindoro, Coron, Letc 375, 327, F. B. 2910 Borden, B. S. 40929, 41170 Ramos. In thickets and forests at low altitudes. Endemic.

Local name: Alumigás (Ilk.).

TRAGIA LUZONENSIS Merr. in Philip. Journ. Sci. 16 (1920) 564.

Luzon (Ilocos Norte), *B. S. 32854 Ramos*. In dry forests at low altitudes. Endemic.

TRAGIA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 16 (1920) 565.

Luzon (Abra), *B. S. 27013 Ramos*. In forests at low or medium altitudes. Endemic.

36. **PLUKENETIA** Linnaeus

PLUKENETIA CORNICULATA Smith in Nov. Act. Soc. Sci. Upsal. 6 (1799) 4; Merr. in Philip. Journ. Sci. 16 (1920) 564.

Pterococcus corniculatus Pax & Hoffm. in Engl. Pflanzenreich 68¹ (1919) 22.

Luzon (Rizal), *B. S. 24086 Ramos*. In old clearings at low or medium altitudes. India through Malaya to the Moluccas.

37. **RICINUS** Tournefort

RICINUS COMMUNIS Linn. Sp. Pl. (1753) 1007; Blanco Fl. Filip. (1837) 761, ed. 2 (1845) 523, ed. 3, 3 (1879) 161; Miq. Fl. Ind. Bat. 1² (1858-59) 391; Muell.-Arg. in DC. Prodr. 15² (1866) 1017; F.-Vill. Novis. App. (1880) 196; Vidal Sinopsis Atlas (1883) 39, t. 78, f. F; Merr. Fl. Manila (1912) 296, Sp. Blancoanae (1918) 227; Pax & K. Hoffm. in Engl. Pflanzenreich 68¹ (1919) 119, fig. 29.

Throughout the Philippines in the settled areas, in open waste places. Of prehistoric introduction in the Philippines. Pantropic, a native of the Old World.

Local names: Kataná (Iv., Bon.); gatlaoua (If.); lamsína (Tag.); lĩngáñg-sína (Tag.); tañgan-tañgan (Tag., Bik.); tañgan-tañgan-jawa (Sul.); taoa-taoá (Ilk.); taua-tauá (Ilk.); taua-taua-sína (Ilk.).

38. **HOMONOIA** Loureiro

HOMONOIA JAVENSIS (Blume) Muell.-Arg. in Linnaea 34 (1865) 200, DC. Prodr. 15² (1866) 1022; J. J. Sm. in Koord. & Val. Bijdr. Boom. Java 12 (1910) 544; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 391; Pax & Hoffm. in Engl. Pflanzenreich 68¹ (1917) 117, f. 27.

Spathiostemon javense Blume Bijdr. (1825) 622.

Mallotus eglandulosus Elm. Leaf. Philip. Bot. 1 (1908) 313.

Mindoro, Panay, Negros, Cebu, Leyte, Mindanao (Surigao, Agusan, Davao), *Elmer 7152, 7318, 13918, Merrill Phil. Pl. 1682, B. S. 17661, 39514 Ramos, 40697 Ramos & Edaño*. In primary forests at low altitudes. Malay Peninsula, Java, Borneo, Amboina, Timor, Key, New Guinea.

Local names: Apanang (S. L. Bis., C. Bis.); balit (P. Bis.); bayótai (P. Bis.); burilis-maputí (C. Bis.); mala-mala (C. Bis.); manugupinang (P. Bis.); oyagiñgan (Mbo.); panang (P. Bis.).

Var. **CILIATA** Merr. in Philip. Journ. Sci. 7 (1912) 391.

Negros, *F. B. 7246, 12325 Everett*. In forests at low altitudes; reduced by Pax and Hoffmann to the species. Endemic.

HOMONOA RIPARIA Lour. Fl. Cochinch. (1790) 637; Muell.-Arg. in DC. Prodr. 15² (1866) 1023; Hook. f. Fl. Brit. Ind. 5 (1887) 455; F.-Vill. Novis. App. (1880) 196; Vidal Sinopsis Atlas (1883) 39, t. 84, f. E, Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 264; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 32, Philip. Journ. Sci. 1 (1906) Suppl. 81; Fl. Manila (1912) 296, Sp. Blancoanae (1918) 228; Elm. Leaf. Philip. Bot. 3 (1910) 922; Pax & Hoffm. in Engl. Pflanzenreich 68¹ (1917) 114, fig. 27, A-D. *Lumanaja fluvialis* Blanco Fl. Filip. (1837) 821, ed. 2 (1845) 568, ed. 3, 3 (1879) 236, t. 338.

Luzon (Cagayan to Sorsogon), Mindoro, Palawan, Sibuyan, Negros, Mindanao. A very characteristic species, abundant along small swift streams at low and medium altitudes, on the banks and in the stream beds. India to Formosa southward through Malaya to Timor and Celebes.

Local names: Agibába (Ibn.); agui (Tag.); agoyói (Tag.); agúkuk (Tag.); aguyói (Tag.); agúkuk (Tag.); alosai (Tag.); amágos (Tagb.); ataŋgatāŋgan (Ibn.); bilibig (Bik.); chomanai (Ig.); dumanai (Ibn., Ilk.); dumaní (Ig.); hañgarai (S. L. Bis.); kagoyói (Tag.); lomonai (Tag.); lumanái (Tag.); mayóyos (P. Bis.); mayágos (Bis.); malabúgos (P. Bis.); manágos (Tag.); mangápos (Tag.); miagúi (P. Bis.); miagóuk (P. Bis.).

39. ALEURITES Forster

ALEURITES MOLUCCANA (Linn.) Willd. Sp. Pl. 4 (1805) 590; Muell.-Arg. in DC. Prodr. 15² (1866) 723; F.-Vill. Novis. App. (1880) 191; Vidal Sinopsis Atlas (1883) 38, t. 83, f. A, Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 241; Langeron Gen. Aleurites (1902) 28; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 32, Govt. Lab. Publ. (Philip.) 27 (1906) 76, Fl. Manila (1912) 290, Sp. Blancoanae (1918) 228; Pax in Engl. Pflanzenreich 42 (1910) 129.

Jatropha moluccana Linn. Sp. Pl. (1753) 1006.

Croton moluccanus Linn. op. cit. 1005, quoad syn. Burm.

Croton moluccanus Lam. Encycl. 2 (1786) 207.

Aleurites triloba Forst. Char. Gen. (1776) 112; Blanco Fl. Filip. ed. 2 (1845) 520, ed. 3, 3 (1879) 157, t. 220.

Juglans camirium Lour. Fl. Cochinch. (1790) 573.

Aleurites lobata Blanco Fl. Filip. (1837) 756.

Aleurites lanceolata Blanco Fl. Filip. (1837) 757, ed. 2 (1845) 521, ed. 3, 3 (1879) 157.

Throughout the Philippines at low and medium altitudes, in second-growth forests, thickets, etc. Tropical Asia to Polynesia, now planted in most tropical countries. Candlenut.

Local names: Biau (C. Bis., Bag.); kalúmban (Tag.); kapili (Tag.); kami (Sul.); lúmbang (Tag.); lúmbang-bató (Tag.); rúmbang (Bis.).

ALEURITES TRISPERMA Blanco Fl. Filip. (1837) 755; Muell.-Arg. in DC. Prodr. 15² (1866) 724; F.-Vill. Novis. App. (1880) 191; Ceron Cat. Pl. Herb. Manila (1892) 151; Langeron Gen. Aleurites (1902) 40; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 76, Fl. Manila (1912) 290, Sp. Blancoanae (1918) 228; Pax in Engl. Pflanzenreich 42 (1910) 131.

Aleurites saponaria Blanco Fl. Filip. ed. 2 (1845) 519, ed. 3, 3 (1879) 156, t. 296.

Luzon (Union, Laguna, Cavite, Batangas, Tayabas, Rizal, Camarines), Negros, Mindanao (Davao). In forests at low and medium altitudes, widely scattered, sometimes planted. Endemic.

Local names: Bagilúmbang (Tag.); balukanág (Ilk., Bis., Tag.); banukalád (Tag.); banunkalág (Tag.); balokanád (Tag.); lúmbang (Bik.); lúmbang-banukalád (Tag.); kalúmban (Tag.); lumbáng-gúbat (Tag.).

40. TRITAXIS Baillon

TRITAXIS CUMINGII (Muell.-Arg.) Benth. in Journ. Linn. Soc. Bot. 17 (1878) 221; F.-Vill. Novis. App. (1880) 191; Vidal Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 241; Pax in Engl. Pflanzenreich 42 (1910) 114.

Trigonostemon cumingii Muell.-Arg. in Linnaea 34 (1865) 213, DC. Prodr. 15² (1866) 1107.

Samar, Mindanao (Zamboanga), *Cuming 1693, F. B. 9214 Whitford & Hutchinson*. In primary forests at low altitudes; very rare or local. Endemic.

41. JATROPHA Linnaeus

JATROPHA CURCAS Linn. Sp. Pl. (1753) 1006; Blanco Fl. Filip. (1837) 759, ed. 2 (1845) 522, ed. 3, 3 (1879) 160, t. 384; Miq. Fl. Ind. Bat. 1² (1858-59) 392; Muell.-Arg. in DC. Prodr. 15² (1866) 1080; Vidal Sinopsis Atlas (1883) 38, t. 83, f. B, Phan. Cuming. Philip. (1885) 143, Rev. Pl. Vasc. Filip. (1886) 241; F.-Vill. Novis. App. (1880) 191; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 27, 27 (1905) 76, Fl. Manila (1912) 289, Sp. Blancoanae (1918) 229; Pax in Engl. Pflanzenreich 42 (1910) 77.

In hedges throughout the Philippines, usually very common in and about towns. Introduced at an early date in colonial history from Mexico, now pantropic. Physic nut.

Local names: Galúmbang (Pamp.); kásla (Bis.); kirisól (Tag.); taba-tabá (Tag.); tagumbáu (Ilk.); tagumbau-na-puráu (Ilk.); takumbau (Sbl.); tañgan-tañgan-túba (Tag.); taua-tauá (Ilk., Ig.); tauuá (Ilk.); túba (Ig., Bik., Tag.); túbang-bakód (Tag.).

JATROPHA GOSSYPIFOLIA Linn. Sp. Pl. (1753) 1006; Muell.-Arg. in DC. Prodr. 15² (1866) 1086; Usteri Beitr. Ken. Philip. Veg. (1905) 126; Pax in Engl. Pflanzenreich 42 (1910) 26; Merr. Fl. Manila (1912) 290.

Luzon (Amburayan, Ilocos Sur, Union, Pangasinan, Rizal), Biliran, Leyte, Negros, Cebu, Mindanao (Agusan). In waste places at low altitudes, locally abundant. A native of tropical America, now pantropic.

Local names: Balautandoiong (Ilk.); tagumbau-a-nalabága (Ilk.); taua-tauá (Ilk.); túba-sa-buáia (Bik.); tuba-túba (P. Bis., C. Bis.); lansi-lansináan (Tag.).

JATROPHA MULTIFIDA Linn. Sp. Pl. (1753) 1006; Miq. Fl. Ind. Bat. 1² (1858-59) 392; Muell.-Arg. in DC. Prodr. 15² (1866) 1089; F.-Vill. Novis. App. (1880) 191; Ceron Cat. Pl. Herb. Manila (1892) 151; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 27, 27 (1905) 76, Fl. Manila (1912) 289, Sp. Blancoanae (1918) 229; Pax in Engl. Pflanzenreich 42 (1910) 40.

Jatropha janipha Blanco Fl. Filip. (1837) 758, ed. 2 (1845) 521, ed. 3, 3 (1879) 159, t. 342, non Linn.

Luzon (Bataan, Rizal, Laguna, Tayabas, Camarines), Mindanao (Zamboanga). Planted for ornamental purposes, occasional also in hedges. Introduced from tropical America.

Local names: Maná (Sp.); tubang-amerikáno (Bik.).

Jatropha podagrica Hook. is rare in cultivation in Manila and presents no evidence that it will persist; see Merrill Fl. Manila (1912) 289.

42. HEVEA Aublet

HEVEA BRASILIENSIS (HBK.) Muell.-Arg. in Linnaea 34 (1865) 204, DC. Prodr. 15² (1866) 718; Merr. Fl. Manila (1912) 293.

Siphonia brasiliensis HBK. Nov. Gen. Sp. Pl. 7 (1818) 141.

Cultivated in Mindanao, Basilan, etc., occasionally planted in other islands. Para rubber; introduced early in the present century, a native of Brazil.

43. MANIHOT Tournefort

MANIHOT GLAZIOVII Muell.-Arg. in Mart. Fl. Bras. 11² (1874) 446; Merr. Fl. Manila (1912) 297; Pax in Engl. Pflanzenreich 44 (1910) 89, f. 31.

Introduced in the early part of the present century, occasional in cultivation; a native of tropical South America, now pantropic in cultivation. Ceara rubber.

MANIHOT UTILISSIMA Pohl Pl. Bras. Ic. Descr. 1 (1827) 32, t. 24; Muell.-Arg. in DC. Prodr. 15² (1866) 1064; F.-Vill. Novis. App. (1880) 193; Vidal Sinopsis Atlas (1883) 33, t. 33, f. C, Rev. Pl. Vasc. Filip. (1886) 243; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 81, Fl. Manila (1912) 297, Sp. Blancoanae (1918) 229; Pax in Engl. Pflanzenreich 44 (1910) 67 f. 24.

Jatropha manihot Linn. Sp. Pl. (1753) 1007; Blanco Fl. Filip. (1837) 760, ed. 2 (1845) 522, ed. 3, 3 (1879) 160.

Throughout the Philippines in the settled areas, planted and semicultivated. Introduced from Mexico in the early colonial period, now pantropic. Cassava, or tapioca.

Local names: Balañgai (S. L. Bis.); kamóte ti moro (Ilk., Ibn.); kamóte-káhoi (Sul.); kamoting-káhoi (Sbl., Bik., Bis., Tag.); malambóna (Tagb.); padpádi (Bon.); panggi-kahui (Sul.).

44. GALEARIA Moritzi

GALEARIA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 482; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1917) 43.

Galearia filiformis Merr. in Philip. Journ. Sci. 4 (1909) Bot. 280, non Boerl.

Mindanao (Lanao, Zamboanga), Basilan, B. S. 16319 Reillo, 36750, 37103 Ramos & Edaña, F. B. 9116 Whitford & Hutchinson, Clemens. In primary forests at low altitudes. Endemic.

45. MICRODESMIS Hooker f.

MICRODESMIS CASEARIFOLIA Planch. in Hook. Ic. 8 (1848) *t.* 758; Muell.-Arg. in DC. Prodr. 15² (1866) 1041; Hook. f. Fl. Brit. Ind. 5 (1887) 380; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 283; Pax in Engl. Pflanzenreich 47 (1911) 106, 52 (1912) 286, 63 (1914) 408.

Tetragyne acuminata Miq. Fl. Ind. Bat. Suppl. (1860-61) 463; Muell.-Agr. in DC. Prodr. 15² (1866) 1254; Hallier f. in Meded. Rijks Herb. 1 (1910) 11.

Microdesmis philippinensis Elm. Leaflet. Philip. Bot. 4 (1911) 1300.

Palawan, Bancalan, Balabac. Common in thickets, second-growth forests, etc., at low and medium altitudes. Burma to southern China, Hainan, Malay Peninsula, Borneo.

Local name: Balanatu (Tagb.).

46. TRIGONOSTEMON Blume

TRIGONOSTEMON ACUMINATUS Merr. in Philip. Journ. Sci. 11 (1916) Bot. 190; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 41.

Samar, *B. S.* 24189, 24528 Ramos, 24890 Edaña. In primary forests at low altitudes. Endemic.

TRIGONOSTEMON ANGUSTIFOLIUS Merr. in Philip. Journ. Sci. 20 (1922) 396.

Mindanao (Zamboanga), *B. S.* 36764, 36560 Ramos & Edaña. On forested slopes at low altitudes. Endemic.

Local name: Pulúli (Sub.).

TRIGONOSTEMON ANOMALUS Merr. in Philip. Journ. Sci. 16 (1920) 569.

Mindanao (Zamboanga), *F. B.* 22018 Villamil, *B. S.* 36612, 37297, 37326, 37437 Ramos & Edaña. In forests at low altitudes. Endemic.

TRIGONOSTEMON EVERETTII Merr. in Philip. Journ. Sci. 7 (1912) Bot. 408.

Negros, *F. B.* 7257, 5581 Everett. In primary forests at low altitudes. Endemic.

Pax & Hoffmann, in Engl. Pflanzenreich 63 (1914) 408, consider that this species scarcely belongs in *Trigonostemon*, but from the material available I fail to place it elsewhere.

TRIGONOSTEMON HIRSUTUS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 335; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 406.

Mindanao (Zamboanga), *B. S.* 11798 Robinson, *F. B.* 9311 Whitford & Hutchinson, *B. S.* 36642 Ramos & Edaña. In primary forests at low altitudes. Endemic.

Local name: Gulambog (Sub.).

TRIGONOSTEMON LAXIFLORUS Merr. in Philip. Journ. Sci. 16 (1920) 567.

Panay, *B. S.* 31097 Ramos & Edaña. In primary forests at low altitudes. Endemic.

TRIGONOSTEMON LONGIPEDUNCULATUS (Elm.) Elm. Leaf. Philip. Bot. 4 (1911) 1306; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 408.

Croton longipedunculatus Elm. Leaf. Philip. Bot. 1 (1908) 311.

Luzon (Tayabas, Nueva Ecija, Camarines), Alabat, Leyte, Mindanao (Surigao), *Elmer 7264, B. S. 28494, 26416, 33837 Ramos & Edaño, Merrill 10485, Wenzel 1513, 1716*. In primary forests at low altitudes. Endemic.

TRIGONOSTEMON LONGIPES (Merr.) Merr. in Philip. Journ. Sci. 11 (1916) Bot. 191; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 41.

Dimorphocalyx longipes Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 82; Pax & Hoffm. in Engl. Pflanzenreich 47 (1911) 33.

Luzon (Bataan, Bulacan, Rizal, Laguna, Tayabas), Mindoro, *Whitford 1066, Merrill 2699, Elmer 17583, B. S. 26911 Edaño, 13428, 39575 Ramos, 34041 Ramos & Edaño, F. B. 1801 Borden, 17330 Curran*. In primary forest at low and medium altitudes. Endemic.

TRIGONOSTEMON LUZONIENSIS Merr. in Philip. Journ. Sci. 16 (1920) 568.

Luzon (Camarines), *B. S. 33539 Ramos & Edaño*. In forests along streams at low altitudes. Endemic.

TRIGONOSTEMON MACGREGORII Merr. in Philip. Journ. Sci. 16 (1920) 566.

Luzon (Laguna), Panay, *B. S. 22848, 26228, 32424 McGregor*. In primary forests up to 300 m altitude. Endemic.

TRIGONOSTEMON MERRILLII Elm. Leaf. Philip. Bot. 4 (1911) 1304; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 407.

Palawan, *Elmer 12819, Merrill 739, F. B. 4153 Curran*. In forests up to 225 m altitude. Endemic.

TRIGONOSTEMON OBLANCEOLATUS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 337; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 407.

Mindanao (Zamboanga), Basilan, *Williams 2185, Merrill 8198, B. S. 15442, 15458 Reillo*. In primary forests, ascending to 850 m altitude. Endemic.

TRIGONOSTEMON OBLONGIFOLIUS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 409; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 407.

Luzon (Cagayan, Ilocos Norte), *B. S. 7745, 13965, 33109 Ramos, F. B. 19604 Curran*. In forests at low or medium altitudes. Endemic.

TRIGONOSTEMON PHILIPPINENSIS Stapf in Leaf. Philip. Bot. 1 (1907) 206; Pax in Engl. Pflanzenreich 47 (1911) 91.

Luzon (Apayao, Laguna, Camarines), Leyte, Panay. In primary forests at low and medium altitudes; locally abundant. Endemic.

TRIGONOSTEMON POLYANTHUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 492.

Samar, *Merrill Phil. Pl. 1645*. In primary forests at low altitudes. Endemic.

TRIGONOSTEMON WENZELII Merr. in Philip. Journ. Sci. 8 (1913) Bot. 380; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 41.

Leyte, *Wenzel 186*. In forests at low altitudes. Endemic.

47. **TRIGONOPLEURA** Hooker f.

TRIGONOPLEURA DUBIA (Elm.) Merr. in Philip. Journ. Sci. 11 (1916) Bot. 77; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 42.

Alsodeia dubia Elm. Leaf. Philip. Bot. 8 (March, 1915) 2875.

Trigonopleura philippinensis Merr. in Philip. Journ. Sci. 10 (August, 1915) Bot. 275.

Samar, Leyte, Mindanao (Agusan, Surigao), *Elmer 13956*, *Wenzel 854*, *935*, *709*, *B. S. 17475 Ramos*, *F. B. 23900 Ponce*. In primary forests at low altitudes, ascending to 1,000 m. Endemic.

Local names: Badabogon (Mbo.); magotalísai (C. Bis.).

48. **CODIAEUM** (Rumph.) Jussieu

CODIAEUM CILIATUM Merr. in Philip. Journ. Sci. 16 (1920) 571.

Panay, *B. S. 31233*, *30895*, *31230*, *31231 Ramos & Edaña*, *35360 Martelino & Edaña*. In primary forests along small streams at low altitudes. Endemic.

Local names: Kalangkáng (P. Bis.); panagáng (P. Bis.).

CODIAEUM HIRSUTUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 476; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 37.

Biliran, *B. S. 18539 McGregor*. In forests at low altitudes. Endemic.

CODIAEUM LUZONICUM Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 81;

Pax & Hoffm. in Engl. Pflanzenreich 47 (1911) 28, 63 (1914) 404.

Codiaeum cuneifolium Pax & Hoffm. in Engl. Pflanzenreich 47 (1911) 28, fig. 7.

Luzon (Isabela, Bulacan, Bataan, Rizal, Laguna, Sorsogon, incl. *Elmer 16786* as *C. irosinense* Elm.), Leyte, Siargao. Locally common, in primary forests at low altitudes. *Codiaeum cuneifolium* Pax & Hoffm. is identical with *C. luzonicum* Merr.; the figure of the ♀ flower is erroneous, the slender style arms being broken off. Endemic.

Local names: Butong (Tag.); pugarang-pipít (Tag.); putak (S. L. Bis.).

CODIAEUM MACGREGORII Merr. in Philip. Journ. Sci. 16 (1920) 573.

Panay, *B. S. 32419 McGregor*. In primary forests, altitude 900 m. Endemic.

CODIAEUM MEGALANTHUM Merr. in Philip. Journ. Sci. 16 (1920) 570.

Luzon (Cagayan, Ilocos Norte), *B. S. 27353*, *33014 Ramos*, *F. B. 19640 Curran*. On forested slopes at low altitudes. Endemic.

CODIAEUM PALAWANENSE Elm. Leaf. Philip. Bot. 4 (1911) 1283; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 404.

Luzon (Tayabas), Alabat, Catanduanes, Mindoro, Palawan, Balabac, Mindanao (Davao); *Elmer 13196*, *B. S. 492 Mangubat*, *599 Foxworthy*, *13377*, *19466*, *30532*, *30412*, *40877 Ramos*, *F. B. 28133 Aguilar*, *Merrill*

10512, *Phil. Pl.* 1266. In primary forests at low altitudes, ascending to 700 m. Endemic.

Local name: Lubalubí (Tagb.).

CODIAEUM TRICHOCALYX Merr. in *Philip. Journ. Sci.* 16 (1920) 570.

Luzon (Zambales), *B. S.* 26797 *Edaño*. In forests at low altitudes. Endemic.

CODIAEUM VARIEGATUM (Linn.) Blume *Bijdr.* (1825) 606; Muell.-Arg. in *DC. Prodr.* 15² (1866) 119; Hook. f. *Fl. Brit. Ind.* 5 (1887) 399; F.-Vill. *Novis. App.* (1880) 192; Merr. in *Philip. Bureau Forestry Bull.* 1 (1903) 32, *Fl. Manila* (1912) 291, *Interpret. Herb. Amb.* (1917) 325, *Sp. Blancoanae* (1918) 299; Pax & Hoffm. in *Engl. Pflanzenreich* 47 (1911) 23, f. 6.

Croton variegatus Linn. *Sp. Pl.* (1753) 1199; Blanco *Fl. Filip.* (1837) 751, ed. 2 (1845) 517, ed. 3, 3 (1879) 152, t. 390.

Codiaeum chrysosticton Spreng. *Syst.* 3 (1826) 866; Llanos ex F.-Vill. & Naves in Blanco *Fl. Filip.* ed. 3, 4¹ (1880) 105.

Phyllaurea codiaeum Lour. *Fl. Cochinch.* (1790) 575.

Phyllaurea variegata W. F. Wight in *Contr. U. S. Nat. Herb.* 9 (1905) 352.

Cultivated throughout the Philippines; very common and exceedingly variable. No form is indigenous, and none is even naturalized. The form commonly cultivated previous to about 1880 is that represented by *Merrill Sp. Blancoanae* 1062; most or all other cultural forms have been introduced since that date.

Local names: Buena vista (Sp.); ciprés (Bik.); kalipayang (Bis.); kilala-putí (Sul.); San Francisco (Sp.); sagilála (Tag.).

49. OSTODES Blume

OSTODES ANGUSTIFOLIA Merr. in *Philip. Journ. Sci.* 7 (1912) Bot. 403; Pax & Hoffm. in *Engl. Pflanzenreich* 63 (1914) 414.

Mindanao (Zamboanga), *F. B.* 9343 *Whitford & Hutchinson*. In primary forests at low altitudes. Endemic.

OSTODES IXOROIDES C. B. Rob. in *Philip. Journ. Sci.* 6 (1911) Bot. 332; Pax & Hoffm. in *Engl. Pflanzenreich* 63 (1914) 403.

Luzon (Cagayan, Isabela, Ilocos Norte, Bulacan), *F. B.* 13426 *Klemme*, *B. S.* 7421, 7747, 13901, 13853, 33051 *Ramos*, 34109 *Ramos & Edaño*, 21176 *Escritor*, *Merrill Phil. Pl.* 1936. In primary forests at low altitudes. Endemic.

OSTODES MACROPHYLLUS (Muell.-Arg.) Benth. & Hook. f. ex Jackson *Index Kewensis* 2 (1895) 382; Pax in *Engl. Pflanzenreich* 47 (1911) 18, 52 (1912) 284; Merr. in *Philip. Journ. Sci.* 7 (1912) Bot. 404.

Tritaxis macrophylla Muell.-Agr. in *Flora* 47 (1864) 482.

Trigonostemon macrophyllus Muell.-Arg. in *Linnaea* 34 (1865) 213, *DC. Prodr.* 15² (1866) 1106.

Ostodes serrato-crenata Merr. in *Philip. Journ. Sci.* 4 (1909) Bot. 283; Elm. *Leaf. Philip. Bot.* 3 (1910) 926.

Luzon (Cagayan, Tayabas, Laguna, Camarines), Sibuyan, Panay, *F. B.* 7078, 11271 Klemme, 15247 Bernardo, 21797 Barros, 26778 Mabesa, 22305 Mariano, *B. S.* 13820, 23828, 15004, 10051, 10966 Ramos, 35548, 31176 Ramos & Edaño, Elmer 12480, 12366. In primary forests at low altitudes. Malay Peninsula, Borneo.

Local names: Agindulong (Neg.); malasabón (Tag.); panantólen (Ilk.); tagalipa (Neg.); tagalipák (Neg.).

50. DIMORPHOCALYX Thwaites

DIMORPHOCALYX DENTICULATUS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 278; Pax in Engl. Pflanzenreich 52 (1912) 285.

Mindanao (Zamboanga), *F. B.* 9033 Whitford & Hutchinson, *B. S.* 36920, 36927, 36946 Ramos & Edaño. In primary forests at low altitudes. Endemic.

DIMORPHOCALYX LUZONIENSIS Merr. in Philip. Journ. Sci. 5 (1910) Bot. 192; Pax in Engl. Pflanzenreich 52 (1912) 284.

Luzon (Laguna, Tayabas, Batangas, Camarines), Samar, Leyte, *B. S.* 20799 Escritor, 24463 Ramos, Merrill *Phil. Pl.* 1260, Loher 5625, *F. B.* 24867, 24868 Mabesa, 11996 Tamesis, 21219 Alvarez. In primary forests at low and medium altitudes. Endemic.

DIMORPHOCALYX MURINUS Elm. Leaf. Philip. Bot. 4 (1911) 1285; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 404.

Palawan, Elmer 12844, 13156, 12773, *F. B.* 21579 Danao, 21476 Fernandez. In primary forests at low and medium altitudes. Endemic.

51. STROPHIOBLACHIA Boerlage

STROPHIOBLACHIA FIMBRICALYX Boerl. Handl. Fl. Nederl. Ind. 3¹ (1900) 236, 284; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 284; Pax in Engl. Pflanzenreich 47 (1911) 36, 52 (1912) 285.

Strophioblachia glandulosa Pax in Engl. Pflanzenreich 47 (1911) 36, f. 10.

Luzon (Union), Palawan, Panay, Mindanao (Zamboanga), Bongao, *Lete* 239, Mearns 114, *B. S.* 32273 McGregor, 36307 Yates, 241 Bermejós, *F. B.* 4504 Curran. In thickets near the seashore; very local. Cochinchina, Celebes; a monotypic genus.

Local names: Salsalígau (Ilk.); sallapígo (Ilk.).

52. BLACHIA Baillon

BLACHIA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 4 (1909) Bot. 277; Pax in Engl. Pflanzenreich 52 (1912) 285.

Luzon (Ilocos Norte, Union, Pangasinan), Palawan, *F. B.* 4128 Curran, 13829 Merritt & Darling, 8369 Curran & Merritt, *Lete* 310, 339, Merrill *Phil. Pl.* 1374. In thickets and forests at low altitudes. Endemic.

Local name: Pañgapién (Ilk.).

53. GELONIUM Roxburgh

GELONIUM GLOMERULATUM (Blume) Hassk. Cat. Hort. Bogor. (1844) 237; Miq. Fl. Ind. Bat. 1² (1858-59) 390; Muell.-Arg. in DC. Prodr. 15² (1866) 1128; Hook. f. Fl. Brit. Ind. 5 (1887) 460; F.-Vill. Novis. App. (1880) 196; Vidal Phan. Cuming. Philip. (1885)

144, Rev. Pl. Vasc. Filip. (1886) 247; Pax in Engl. Pflanzenreich 52¹ (1912) 18, 63 (1914) 414.

Erythrocarpus glomeratus Blume Bijdr. (1825) 605.

Suregada glomerata Baill. Étud. Gén. Euphorb. (1858) 396.

Salacia macrophylla A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 286, non Blume.

Gelonium subglomeratum Elm. Leaf. Philip. Bot. 4 (1911) 1292.

Gelonium pulgarens Elm. op. cit. 1293.

Gelonium meliocarpum Elm. op. cit. 3 (1910) 919.

Northern Luzon to Palawan and Mindanao. In forests at low and medium altitudes, ascending to 1,250 m. Common. Malay Peninsula, Sumatra, Java, Borneo, Celebes, Timor.

Local names: Kuañgiyan (Sul.); malaua (P. Bis.); maraasi (Neg.); panglangkaen (Ilk., Ting.) sukalpi (Bik.).

GELONIUM PHILIPPINENSE Pax & Hoffm. in Engl. Pflanzenreich 52 (1912) 22.

Gelonium mindanaense Elm. Leaf. Philip. Bot. 7 (1915) 2640; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1917) 52.

Northern Luzon to Mindanao. In forests at low and medium altitudes; scarcely distinguishable from *Gelonium glomerulatum* Hassk. and endemic unless referable to Hasskarl's species.

Local names: Bagna (Sul.); bodung (Mbo.); magaloput (Mbo.); malapud (Pamp.); malatuba (Buk.).

GELONIUM RACEMULOSUM Merr. in Philip. Journ. Sci. 4 (1909) Bot. 281; Pax & Hoffm. in Engl. Pflanzenreich 52¹ (1912) 286.

Mindanao (Zamboanga), *F. B. 9260, 9349 Whitford & Hutchinson, B. S. 36762, 36793, 37329 Ramos & Edaño*. In primary forests at low altitudes. Endemic.

54. NEOSCORTECHINIA Pax

NEOSCORTECHINIA ARBOREA (Elm.) Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 52.

Alchornea arborea Elm. Leaf. Philip. Bot. 4 (1911) 1274.

Alcinaecanthus philippinensis Merr. in Philip. Journ. Sci. 7 (1912) Bot. 380.

Alcinaecanthus arboreus Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 415.

Scortechinia arborea Merr. in Philip. Journ. Sci. 11 (1916) Bot. 75.

Mindoro, Leyte, Mindanao (Davao, Cotabato), *F. B. 6851 Merritt, 12759 Rosenbluth, 11767, 11815 Whitford, Merrill Phil. Pl. 1627, Wenzel 643, 649, 944, Williams 2884*. In forests at low altitudes. Endemic.

Local name: Magong (S. L. Bis.).

NEOSCORTECHINIA PARVIFOLIA (Merr.) comb. nov.

Alcinaecanthus parvifolius Merr. in Philip. Journ. Sci. 9 (1914) Bot. 461.

Scortechinia parvifolia Merr. op. cit. 11 (1916) Bot. 76.

Neoscortechinia arborea Pax & Hoffm. var. *parvifolia* Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 52.

Luzon (Laguna), *B. S. 20586 Ramos*. In damp forests at low or medium altitudes. Endemic.

55. CHEILOSA Blume

CHEILOSA HOMALIIFOLIA Merr. in Philip. Journ. Sci. 8 (1913) Bot. 379; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 50.

Leyte, Samar, Dinagat, *Wenzel* 147, 161, 647, 926, 1072, *B. S.* 24373 *Ramos*, 35170 *Ramos & Pascasio*, *Merrill Phil. Pl.* 1664. In primary forests at low altitudes. Endemic.

Local name: Magong (S. L. Bis.).

Var. **GRANDIFOLIA** var. nov.

A typo differt foliis majoribus, 25 ad 30 cm longis, usque ad 16 cm latis, inflorescentiis pilosis.

Mindanao (Zamboanga), *B. S.* 37282 *Ramos & Edaño*. In forests along streams at low altitudes. Endemic.

Local name: Lalatan (Sub.).

56. ENDOSPERMUM Benthams

ENDOSPERMUM OVATUM Merr. in Philip. Journ. Sci. 9 (1914) Bot. 481; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1917) 53.

Mindanao (Butuan), *B. S.* 15921 *Fénix*. In forests at low altitudes. Endemic.

Pax and Hoffmann, without having seen botanical specimens, state: "Certissime non ad *Endospermum* pertinens." It is an *Endospermum* without the slightest doubt!

ENDOSPERMUM PELTATUM Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 35, Philip. Journ. Sci. 1 (1906) Suppl. 82; Pax in Engl. Pflanzenreich 52¹ (1912) 37.

Luzon (Cagayan, Benguet, Bataan, Rizal, Laguna, Tayabas, Camarines, Albay, Sorsogon), Mindoro, Mindanao (Agusan, Butuan, Cotabato, incl. *Elmer* 16188 as *E. philippinense* Elm.). In primary forests at low altitudes. Endemic.

Local names: Baubáu (Ibn.); bayang (Mbo., Mand.); bilúang (Bik.); binóang (Tag.); binúang (Tag.); ginábang (Ig.); índang (Tag.); kabal (Tag.); kalúkoí (Tag.); magabong (Mag.); malasabón (Tag.); malibubuk (Mbo.).

57. OMPHALEA Linnaeus

OMPHALEA BRACTEATA (Blanco) Merr. Sp. Blancoanae (1918) 230.

Tragia bracteata Blanco Fl. Filip. ed. 2 (1845) 480, ed. 3, 3 (1879) 94.

Pimeleodendron amboinicum F.-Vill. Novis. App. (1880) 196, non Hassk.

Omphalea philippinensis Merr. in Philip. Journ. Sci. 3 (1908) Bot. 236; Pax in Engl. Pflanzenreich 52 (1912) 17.

Luzon (Rizal, Tayabas, Laguna, Camarines), *Cuming* 1468, *Vidal* 1712, 2880, 3875, *Loher* 5213, *Merrill* 1716, *Sp. Blancoanae* 1061, *Whitford* 821, *F. B.* 21475 *Alvarez*, 26027 *Catalan*. In forests along streams. Borneo, Celebes.

Local names: Kamakamatísan (Tag.); kanáuai (Tag.); tablón (Tag.).

OMPHALEA GRANDIFOLIA Merr. in Philip. Journ. Sci. 16 (1920) 574.

Panay, *B. S.* 30813, 30825 *Ramos & Edaño*. In damp forests along streams. Endemic.

OMPHALEA MALAYANA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 71.

Luzon (Isabela, Camarines), *F. B. 21116 Valderrama, 23739 Alvarez, B. S. 21130 Escritor*. In primary forests at low altitudes. Borneo.

Local name: Tigitig (Bik.).

OMPHALEA SARGENTII Merr. in Philip. Journ. Sci. 16 (1920) 574.

Bancalan, *Weber*. In forests at low altitudes. Borneo.

58. EXCOECARIA Linnaeus

EXCOECARIA AGALLOCHA Linn. Syst. ed. 10 (1759) 1288, Moen. Acad. 4 (1859) 122, Sp. Pl. ed. 2 (1763) 1451; Blanco Fl. Filip. (1837) 786, ed. 2 (1845) 541, ed. 3, 3 (1879) 193; Miq. Fl. Ind. Bat. 1² (1858-59) 415; Muell.-Arg. in DC. Prodr. 15² (1866) 1220; F.-Vill. Novis. App. (1880) 179; Vidal Sinopsis Atlas (1883) 39, t. 84, f. G, Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 247; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 82, Fl. Manila (1912) 298, Sp. Blancoanae (1918) 230; Pax in Engl. Pflanzenreich 52 (1912) 166.

Throughout the Philippines along the seashore or within the influence of salt or brackish water. India to Polynesia.

Local names: Alipáta (P. Bis.); batáno (Ilk., Pang.); bota-bóta (Tag., Bis.); búta (Tag.); butabúta (Tag., Pamp., Sul.); dipodáta (C. Bis.); gumaiṅgat (Bag.); himbabau (Pamp., Bis.); iṅgi (Sbl.); lipáta (Bik., Bis., Tag.); lipátang-buhai (Tag., Sul.); siak (Bis.).

EXCOECARIA MACROPHYLLA J. J. Sm. in Meded. Dept. Landbouw 12 (1910) 611; Pax in Engl. Pflanzenreich 52 (1912) 162; Merr. in Philip. Journ. Sci. 16 (1920) 577.

Luzon (Pangasinan, Nueva Ecija), *F. B. 26299 Ablaza, 6029 Zschokke, 28484 Soriano*. In forests at low altitudes. Borneo, Java.

Local name: Sausáu (Ilk., Tag.).

EXCOECARIA MIRANDAE Merr. in Philip. Journ. Sci. 16 (1920) 576.

Basilan, *F. B. 20062 Miranda*. In forests at low altitudes. Endemic.

EXCOECARIA OBTUSA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 389; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 423.

Luzon (Cagayan, Apayao), *B. S. 13917 Ramos, 28363 Fénix*. In forests at low altitudes. Endemic.

EXCOECARIA PACHYPHYLLA Merr. in Philip. Journ. Sci. 16 (1920) 575.

Luzon (Tayabas, east coast), *B. S. 25404 Yates*. In the mossy forest, Mount Cadig, altitude about 800 m. Endemic.

EXCOECARIA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 82; Elm. Leaf. Philip. Bot. 3 (1910) 916, 4 (1911) 1287; Pax in Engl. Pflanzenreich 52 (1912) 164.

Luzon (Cagayan to Camarines), Alabat, Sibuyan, Palawan. In primary forests at low altitudes. Endemic.

Local names: Dakau (Ibn.); batáno (Ilk.); lagusus (Tag.); sausau (Tag.).

Var. **EUPHLEBIA** Merr. in Philip. Journ. Sci. 7 (1912) Bot. 389; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 423.

Luzon (Cagayan, Benguet, Laguna, Tayabas, Camarines), Samar. Habitat of the species. Endemic.

EXCOECARIA STENOPHYLLA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 189; Pax & K. Hoffm. in Engl. Pflanzenreich 68⁴ (1917) 59.

Samar, *B. S. 24348 Ramos*. In forests at low altitudes. Endemic.

Local name: Kalipayan (S. L. Bis.).

59. **HOMALANTHUS** Jussieu

HOMALANTHUS ALPINUS Elm. Leaf. Philip. Bot. 1 (1908) 307; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 357, 9 (1914) Bot. 486; Pax in Engl. Pflanzenreich 52² (1912) 48.

Luzon (Benguet, Bontoc, Lepanto, Ifugao, Nueva Ecija, Nueva Vizcaya, Laguna, Tayabas), Mindoro, Negros. Common in thickets, on ridges, etc., at higher altitudes, ranging from 900 to 2,400 m. Endemic.

Local names: Anablín (Bon.); anitap (Ig.); búta (Ig.); butbúta (Ig.); bubúta (Ig.); saraguan (Neg.).

HOMALANTHUS BICOLOR Merr. in Philip. Journ. Sci. 4 (1909) Bot. 282.

Mindanao (Misamis), *F. B. 4722 Mearns & Hutchinson*. In forests, altitude about 350 m; reduced by Pax and Hoffmann to *H. fastuosus* F.-Vill., a disposition of it I am not as yet prepared to accept. Endemic.

Local name: Topi (Sub.).

HOMALANTHUS CONCOLOR Merr. in Philip. Journ. Sci. 20 (1922) 398.

Mindanao (Bukidnon), *B. S. 39166 Ramos & Edaña*. Altitude 1,000 m.

Local name: Labagti (Buk.).

HOMALANTHUS FASTUOSUS (Linden) F.-Vill. Novis. App. (1880) 196; Vidal Sinopsis Atlas (1883) 39, *t. 84, f. H*, Rev. Pl. Vasc. Filip. (1886) 247; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 417, 5 (1910) Bot. 357; Pax in Engl. Pflanzenreich 52² (1912) 45.

Mappa fastuosa Linden Cat. (1865) 4, Belg. Hort. 15 (1865) 100.

Dibrachion fastuosum Regel in Gartenfl. 15 (1866) 100, *t. 504*.

Curumbium fastuosum Muell.-Arg. in DC. Prodr. 15² (1866) 1144;

Baill. Adansonia 6 (1866) 349, *t. 8*.

Batan Islands, Luzon (Abra, Bontoc, Lepanto, Benguet, Nueva Vizcaya, Tayabas, Laguna, Rizal, Sorsogon), Mindoro, Catanduanes, Panay, Mindanao (Lanáo). Common in thickets, old clearings, etc., mostly above an altitude of 750 m, ascending to 2,000 m. Endemic.

Local names: Balánti (Ilk., Tag., Bis.); bóta (Tag.); bota-bóta (Tag.); botinag (Ig.); bubúta (Ig.); búta (Tag.); buta-búta (Tag., Ig.); putpúta (Ig.); tanugtug (Iv.).

HOMALANTHUS MACRADENIUS Pax & Hoffm. in Engl. Pflanzenreich 52 (1912) 51; Merr. in Philip. Journ. Sci. 9 (1914) Bot. 487.

Homalanthus surigaoense Elm. Leaf. Philip. Bot. 7 (1915) 2645;

Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1919) 57.

Mindanao (Surigao, Agusan, Lanao, Davao), *Elmer 10653, 14045, 13871, Ahern 385, 513, Williams 2570, Clemens*. In thickets and old clearings, ascending to 1,000 m. Endemic.

Local names: Balánti (Mbo., C. Bis.); bilánti (Mbo., Bag.); balárte (Bag.).

HOMALANTHUS MEGAPHYLLUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 485; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1917) 57.

Mindanao (Bukidnon, Surigao), *B. S. 15765 Fénix, 34790 Ramos & Pascasio*. In thickets along streams up to 1,000 m altitude. Endemic.

Local names: Labúlti (Buk.); nabúgki (Buk.).

HOMALANTHUS POPULNEUS (Geisel.) Pax in Engl. & Prantl. Nat. Pflanzenfam. 3⁵ (1890) 96; J. J. Sm. in Koord. & Val. Bijdr. Boom. Java 12 (1910) 621; Pax in Engl. Pflanzenreich 52² (1912) 46 (var. *genuinus* Pax).

Stillignia populnea Geisel. Croton. Monogr. (1807) 80.

Carumbium populneum Muell.-Arg. in DC. Prodr. 15² (1866) 1144.

Sulu Archipelago (Jolo, Tawitawi), Mindanao, Palawan, *B. S. 10813 Foxworthy, Merrill Phil. Pl. 1369*. In thickets at low altitudes. Malay Peninsula, Sumatra, Java, Borneo, Celebes, Amboina, New Guinea.

Var. **LEVIS** (Blanco) Merr. Sp. Blancoanae (1918) 230.

Excoecaria levis Blanco Fl. Filip. (1837) 788, ed. 2 (1845) 543, ed. 3, 3 (1879) 194.

Carumbium populneum Muell.-Arg. var. *minus* Muell.-Arg. in DC. Prodr. 15² (1866) 1145.

Omalanthus leschenaultianus Klotz. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 414, vix Juss.

Homalanthus populifolius F.-Vill. Novis. App. (1880) 196; Vidal Phan. Cuming. Philip. (1885) 144, Rev. Pl. Vasc. Filip. (1886) 247, non Grah.

Homalanthus populneus Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 83, 2 (1907) Bot. 278; Elm. Leaf. Philip. Bot. 3 (1910) 921, 4 (1911) 1294, vix Pax.

Homalanthus populneus Pax var. *siccus* Pax in Engl. Pflanzenreich 52 (1912) 46, excl. syn. Blanco.

Homalanthus populneus Pax var. *minor* Merr. in Philip. Journ. Sci. 7 (1912) Bot. 390; Pax & Hoffm. in Engl. Pflanzenreich 63 (1914) 420.

Luzon (Pangasinan, Bulacan, Bataan, Zambales, Rizal, Laguna, Batangas, Tayabas, Sorsogon, Albay), Palawan, Leyte, Panay, Negros, Mindanao, Basilan. Common in thickets, deserted clearings, etc., at low and medium altitudes. Endemic.

Local names: Balánti (Bik., P. Bis.); balántig (P. Bis.); baláti (Bag.); bánti (Sul.); baiánti (Tag.); binunang-susong (Tag.); botabóta (Tag.); huntaloli (Tagb.); bubiting (Sub.); búta (Tag.); malabinúnga (Tag.); maladúron (Tag.).

HOMALANTHUS ROTUNDIFOLIUS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 486; Pax & Hoffm. in Engl. Pflanzenreich 68⁴ (1917) 57.

Samar, Leyte, Siargao, Mindanao (Surigao), *Merrill Phil. Pl.* 1663, *B. S.* 24178 *Ramos*, 24907 *Edaño*, 34410, 34837 *Ramos & Pascasio*. In thickets and forests at low altitudes. Endemic.

EXCLUDED SPECIES

HOMALANTHUS GIGANTEUS Zoll.; F.-Vill. *Novis. App.* (1880) 196.

60. *SAPIUM* Jacquin

SAPIUM LUZONICUM (Vidal) Merr. in *Philip. Journ. Sci.* 16 (1920) 577.

Myrica luzonica Vidal *Sinopsis Atlas* (1883) 40, *t.* 90, *f.* B; Rolfe in *Journ. Linn. Soc. Bot.* 21 (1884) 316.

Sapium merrillianum Pax & Hoffm. in *Engl. Pflanzenreich* 52 (1912) 213.

Sapium lateriflorum Merr. in *Philip. Journ. Sci.* 1 (1906) Suppl. 83; *Elm. Leaflet. Philip. Bot.* 4 (1911) 1303, non Hemsl. (1901).

Urandra elliptica Merr. in *Philip. Journ. Sci.* 5 (1910) Bot. 195.

Luzon (Ilocos Sur, Bulacan, Rizal, Bataan, Laguna), Mindoro, Palawan, Ticao, Bucas Grande, Mindanao (Davao). In primary forests at low altitudes. Endemic.

Local names: Balakat-gúbat (Tag.); balakbak-gúbat (Tag.); lamóg (Tag.); lamúg (Tag.); loi (Tag.); magalmod (Tagb.); maraotóng (Ilk.); tagumtum (P. Bis.); tua-tua (Mand.); tueg (Ig.).

SAPIUM SANCHEZII Merr. in *Philip. Journ. Sci.* 7 (1912) Bot. 402; Pax & Hoffm. in *Engl. Pflanzenreich* 63 (1914) 423.

Mindanao (Surigao, Lanao, Cotabato), *Bolster* 373, *Sanchez, F. B.* 20628, 18289 *Miranda*, 23036 *Ferraris*. In thickets or forests along or near the seashore. Endemic.

Local name: Bantiano (C. Bis.).

EXCLUDED SPECIES

SAPIUM SEBIFERUM Roxb.; Usteri *Beitr. Ken. Philip. Veg.* (1905) 126.

Roxburgh's species does not occur in the Philippines; Usteri's specimen is in all probability *Homalanthus populneus* Pax.

61. *EUPHORBIA* Linnaeus

EUPHORBIA ATOTO Forst. f. *Prodr.* (1786) 207; Boiss. in *DC. Prodr.* 15² (1862) 12; F.-Vill. *Novis. App.* (1880) 185; Merr. in *Philip. Bureau Forestry Bull.* 1 (1903) 32, *Govt. Lab. Publ. (Philip.)* 27 (1905) 75, *Philip. Journ. Sci.* 3 (1908) Bot. 417, *Sp. Blancoanae* (1918) 230.

Euphorbia dulcis Blanco *Fl. Filip.* (1837) 412, ed. 2 (1845) 287, ed. 3, 2 (1878) 167, non Linn.

Along sandy seashores throughout the Philippines. India to southern China and Formosa through Malaya to Australia and Polynesia, a characteristic strand plant.

Local names: Tairas (Iv.); lamiñgo (Bag.).

EUPHORBIA CAPILLARIS Gagnep. in *Bull. Soc. Bot. France* 68 (1921) 298.

Euphorbia hypericifolia Merr. *Fl. Manila* (1912) 283, non Linn.

Luzon (Manila and vicinity), *Merrill 3673, Marave 45, 49, B. S. 9509 Robinson*. In waste places, open grasslands, etc., locally abundant, but certainly introduced. Siam, Indo-China.

EUPHORBIA HETEROPHYLLA Linn. Sp. Pl. (1753) 453; Boiss. in DC. Prodr. 15² (1862) 72; Merr. Fl. Manila (1912) 282.

Poinsettia heterophylla Klotz. & Garcke in Monatsber. Akad. Berl. (1859) 253.

Manila and other large towns; in waste places, occasional; originally introduced for ornamental purposes. A native of tropical America.

EUPHORBIA HIRTA Linn. Sp. Pl. (1753) 454; Blanco Fl. Filip. ed. 2 (1845) 286, ed. 3, 2 (1878) 166; Merr. Fl. Manila (1912) 283, Interpret. Herb. Amb. (1917) 328, Sp. Blancoanae (1918) 231.

Euphorbia pilulifera Linn. Sp. Pl. (1753) 454; Miq. Fl. Ind. Bat. 1² (1858-59) 420; Boiss. in DC. Prodr. 15² (1862) 21; F.-Vill. Novis. App. (1880) 186; Vidal Phan. Cuming. Philip. (1885) 141, Rev. Pl. Vasc. Filip. (1886) 233; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 83, 3 (1908) Bot. 418.

Euphorbia capitata Lam. Encycl. 2 (1785) 422; Blanco Fl. Filip. (1837) 411.

Throughout the Philippines in waste places, open grasslands, etc., usually very abundant. Pantropic.

Local names: Bamanilag (If.); botobotónis (Tag.); bolobotónis (Pamp.); bobi (Bis.); botónis (Ilk.); bugayau (S. L. Bis.); butobutonisan (Tag.); gatas-gátas (Bis., Tag.); magátas (Pamp.); malis-mális (Pamp.); maragátas (Ilk.); pansi-pansi (Bik.); patik-patik (Sul.); piliak (Sub.); saikan (Tag.); sisiohan (Pamp.); soro-soró (Bik.); tababa (Bis.); tairas (Iv.); tauatauá (P. Bis.); teta (Bon.).

EUPHORBIA LUZONIENSIS Merr. in Philip. Journ. Sci. 16 (1920) 578.

Luzon (Ilocos Norte), *B. S. 27309bis, 27517 Ramos*. In open dry places at low altitudes. Endemic.

EUPHORBIA MAKINOI Hayata in Journ. Coll. Sci. Univ. Tokyo 30¹ (1911) 262; Merr. in Philip. Journ. Sci. 16 (1920) 579.

Euphorbia microphylla Hayata op. cit. 20³ (1904) 79, t. 5, f. H, non Heyne.

Luzon (Ilocos Norte), *B. S. 27309, 32746 Ramos*. In open dry places at low altitudes. Formosa; not certainly distinct from *Euphorbia neo-caledonica* Boiss.

EUPHORBIA NERIIFOLIA Linn. Sp. Pl. (1753) 451; Baill. in DC. Prodr. 15² (1862) 79; F.-Vill. Novis. App. (1880) 186; Miq. Fl. Ind. Bat. 1² (1858-59) 418; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 75, Sp. Blancoanae (1918) 231.

Euphorbia ligularia Roxb. Hort. Beng. (1914) 36, *nomen nudum*, Fl. Ind. ed. 2, 2 (1832) 465; Usteri Beitr. Ken. Philip. Veg. (1905) 126.

Euphorbia pentagona Blanco Fl. Filip. (1837) 413, ed. 2 (1845) 287, ed. 3, 2 (1878) 168, non Haw.

Euphorbia trigona Merr. Fl. Manila (1912) 281, non Haw.

Cultivated in gardens, apparently nowhere spontaneous, *Merrill Sp. Blancoanae* 823. India to Malaya, probably introduced in the latter region.

Local names: Bait (Pamp., Tag.); karimbuáya (Ilk.); lengua de perro (Sp.); soro-sóro (Tag.); sorog-sórog (Pamp., Tag.); sudusúdu (P. Bis.).

EUPHORBIA PLUMERIOIDES Teysm. ex Hassk. Hort. Bogor. Descript. 1 (1858) 29; Miq. Fl. Ind. Bat. 1² (1858-59) 419; Boiss. in DC. Prodr. 15² (1862) 110; J. J. Sm. ex Koord. & Val. in Meded. Dept. Landbouw 10 (1910) 24 (Bijdr. Boomsoort. Java 12: 24).

Luzon (Batangas), Golo, *F. B. 28270 Sulit, Merrill 11559*. On ridges and slopes in thin soil among boulders, sea level to 500 meters altitude. Java (planted), New Guinea.

Dr. J. J. Smith states, l. c., that the species apparently comes from New Guinea. In Batangas Province and on Golo Island it is strictly native, in the latter place being abundant on serpentine bluffs, dominating the vegetation on these bluffs.

EUPHORBIA PROSTRATA Ait. Hort. Kew. 2 (1789) 136; Boiss. in DC. Prodr. 15² (1862) 47; Boiss. Ic. Euph. (1866) 12, *t. 17*; Bernard in Ic. Bogor. 4 (1910) 51, *t. 316*; Merr. Fl. Manila (1912) 283.

Occasional in waste places, along streets, etc., in and about towns, strongly simulating *Euphorbia thymifolia* Linn. Pantropic.

EUPHORBIA PULCHERRIMA Willd. ex Klotz. in Otto & Dietr. Allgem. Gartenz. 2 (1834) 27; Boiss. in DC. Prodr. 15² (1862) 71; F.-Vill. Novis. App. (1880) 186; Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t. 167*; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 27, Fl. Manila (1912) 282.

Poinsettia pulcherrima Grah. in New Edinb. Philos. Journ. 20 (1836) 412.

Cultivated for ornamental purposes, probably introduced about 1870, as yet nowhere spontaneous. A native of Mexico.

Local names: Pascuas (Sp.); rosas de pascua (Sp.).

EUPHORBIA SERRULATA Reinw. ex Blume Bijdr. (1826) 635; Boiss. in DC. Prodr. 15² (1862) 25; Miq. Fl. Ind. Bat. 1² (1858-59) 421; F.-Vill. Novis. App. (1880) 186; Vidal Rev. Pl. Vasc. Filip. (1886) 233; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 75, Philip. Journ. Sci. 3 (1908) Bot. 418, Fl. Manila (1912) 282, Sp. Blancoanae (1918) 185.

Euphorbia parannaquensis Blanco Fl. Filip. ed. 2 (1845) 286, ed. 3, 2 (1878) 165.

Throughout the Philippines in open grasslands at low and medium altitudes. Southern China and Formosa through Malaya to Timor, tropical Australia, and Polynesia.

Local name: Kayutkaran (Bag.).

EUPHORBIA SPLENDENS Bojer in Curtis's Bot. Mag. *t. 2902*; Boiss. in DC. Prodr. 15² (1862) 79; F.-Vill. Novis. App. (1880) 186; Naves in Blanco Fl. Filip. ed. 3 (1877-83) *t. 167*; Merr. Fl. Manila (1912) 281.

Cultivated in Manila and other large towns for ornamental purposes, but nowhere spontaneous. A native of Madagascar.

Local names: Corona de espinas (Sp.); flor fina (Sp.).

EUPHORBIA THYMIFOLIA Linn. Sp. Pl. (1753) 454; Burm. f. Fl. Ind. (1768) 112; Miq. Fl. Ind. Bat. 1² (1858-59) 420; Boiss. in DC. Prodr. 15² (1862) 47; F.-Vill. Novis. App. (1880) 186; Ceron Cat. Pl. Herb. Manila (1892) 147; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 418, Fl. Manila (1912) 383; Bernard in Ic. Bogor. 4 (1910) 49, t. 315.

Throughout the Philippines in waste places, along roads and trails, in fallow rice paddies, etc. Pantropic.

Local name: Makikitot (Ilk.).

EUPHORBIA TIRUCALLI Linn. Sp. Pl. (1753) 452; Blanco Fl. Filip. (1837) 412, ed. 2 (1845) 287, ed. 3, 2 (1878) 167, t. 210; Miq. Fl. Ind. Bat. 1² (1858-59) 420; Boiss. in DC. Prodr. 15² (1862) 96; F.-Vill. Novis. App. (1880) 186; Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 210; Merr. Fl. Manila (1912) 282.

Northern Luzon to Mindanao. Occasionally planted in gardens, hedges, etc., but apparently nowhere spontaneous. An introduced plant in the Philippines. A native of Africa, now planted in most tropical countries.

Local names: Bali-bali (P. Bis.); consuelda (Sp.); katuit (Tag.); konsuérda (Tag.); gaton (Ig.); putputud (Ig.); solda-sólda (C. Bis.); suelda-con-suelda (Bik.); suérda (Tag.).

EUPHORBIA TRIGONA Haw. Pl. Succ. (1812) 127; Boiss. in DC. Prodr. 15² (1862) 256; Hook. f. Fl. Brit. Ind. 5 (1887) 256.

Luzon (Bataan, Lepanto), Mindoro, Palawan, and doubtless in other islands and provinces, *B. S. 6683 Robinson*, *F. B. 9826 Merritt*, *6379 Curran*, *B. S. 38102 Ramos & Edaña*. In thickets and on limestone cliffs, usually along the seashore, ascending to 300 m. India to Malaya.

Local names: Suda-súda (P. Bis.); túba (Bon.).

EXCLUDED SPECIES

EUPHORBIA GAUDICHAUDII Boiss.; F.-Vill. Novis, App. (1880) 186.

EUPHORBIA SPARMANNI Boiss.; F.-Vill. op. cit. 185.

EXCLUDED GENUS

SEBASTIANA CHAMAELIA Muell.-Arg. in DC. Prodr. 15² (1866) 1175; F.-Vill. Novis. App. (1880) 197.

The Philippine record was based on *Cuming 2324*, which was from Malacca, not from the Philippines.

BUXACEAE

1. BUXUS Linnaeus

BUXUS LOHERI Merr. in Philip. Journ. Sci. 9 (1914) Bot. 311.

Luzon (Rizal), *Loher 6857, 6846*. In forests at medium altitudes. Endemic.

BUXUS PACHYPHYLLA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 310.

Luzon (Tayabas), *B. S. 20828 Escritor*, *25462, 25512 Yates*. In primary forests at low or medium altitudes. Endemic.

BUXUS RIVULARIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 309.

Luzon (Tayabas), *B. S.* 13169 Foxworthy & Ramos. On bowlders along streams at low altitudes. Endemic.

BUXUS ROLFEI Vidal Rev. Pl. Vasc. Filip. (1886) 233; Ceron Cat. Pl.

Herb. Manila (1892) 147; Merr. in Philip. Journ. Sci. 1 (1906)

Bot. 84; Hallier f. in Meded. Rijks Herb. 37 (1918) 16.

Luzon (Bataan, Rizal, Pampanga, Tayabas), Sibuyan, Palawan, Mindanao (Surigao), *Williams* 495, *Loher* 6849, *Elmer* 13239, *F. B.* 27150 *Udasco*, 1254, 3054 *Borden*, 12978 *Alvarez*, 24785 *Sulit*. In primary forests at low and medium altitudes. Endemic.

Local names: Malagaápi (Tag); piukbanau (Tag.); sarapuyau (Neg.); yarang-yarang (Neg.).

2. **SARCOCOCCA** Lindley

SARCOCOCCA SALIGNA (D. Don) Muell.-Arg. in DC. Prodr. 16¹ (1869) 12.

Buxus saligna D. Don Prodr. Fl. Nepal. (1825) 63.

Pachysandra coriacea Hook. Exot. Fl. (1825) t. 148.

Sarcococca pruniformis Lindl. in Bot. Reg. (1826) t. 1012; Hook. f.

Fl. Brit. Ind. 5 (1887) 266.

Luzon (Lepanto, Mt. Data), *Loher* 4645, *B. S.* 40224 *Ramos & Edaño*. In the mossy forest, altitude about 2,000 m. Afghanistan, India, Ceylon, Sumatra, China, Formosa.

CORIARIACEAE

1. **CORIARIA** Nissole

CORIARIA INTERMEDIA Matsum. in Bot. Mag. Tokyo 12 (1898) 62;

Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 205, 5 (1910) Bot. 357.

Luzon (Bontoc, Lepanto, Benguet), *B. S.* 31697 *Santos*, 40205 *Ramos & Edaño*, *Williams* 1542, *Merrill* 6526, 4800, *Phil. Pl.* 718, 1752. In ravines, altitude 1,400 to 2,000 m. Formosa.

Local names: Buakat (Ig.); baket (Ig.); bikit (Ig.).

ANACARDIACEAE

1. **BUCHANANIA** Sprengel

BUCHANANIA ACUMINATISSIMA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 34.

Luzon (Laguna, Tayabas, Camarines), Catanduanes, Bucas Grande, *B. S.* 10932, 15066, 23812, 30501 *Ramos*, 28597, 34341 *Ramos & Edaño*, *F. B.* 13097 *Curran*, 25630, 35651 *Cailipan*. In primary forests at low altitudes. Endemic unless referable to the Malayan *B. acuminata* Turcz.=*B. sessilifolia* Blume.

Local names: Balayóhot (Tag.); balihúd (Tag.); baliñgáhud (Tag.); balinghásai (Tag.); maguliók (Tag.).

BUCHANANIA ARBORESCENS Blume Mus. Bot. Lugd.-Bat. 1 (1850)

183; F-Vill. Novis. App. (1880) 55; Merr. Fl. Manila (1912) 300,

Sp. Blancoanae (1918) 232.

Goniocheton arborescens Blume Bijdr. (1826) 1156.

- Buchanania florida* Schauer in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 481; Walp. Repert. 5 (1845) 416; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 366, t. 44; Miq. Fl. Ind. Bat. 1² (1858-59) 638; Engl. in DC. Monog. Phan. 4 (1883) 188; Vidal Sinopsis Atlas (1883) 22, t. 26, f. C, Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 100 (incl. var. *arborescens* Engl., var. *petiolaris* Engl. et ? var. *lucida* Engl.); Perk. Frag. Fl. Philip. (1904) 24; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 33, Philip. Journ. Sci. 1 (1906) Bot. 84.
- Prunus ? laurifolia* Decne. in Nuov. Ann. Mus. Paris 3 (1834) 458; Miq. Fl. Ind. Bat. 1² (1858-59) 458.
- Fagara decandra* Blanco Fl. Filip. (1837) 66, ed. 2 (1845) 48, ed. 3, 1 (1877) 89, t. 63.
- Buchanania florida* Schauer var. *arborescens* Engl. in DC. Monog. Phan. 4 (1883) 189.
- Buchanania longifolia* Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 472, F.-Vill. Novis. App. (1880) 55, non Spanoghe.

Throughout the Philippines at low and medium altitudes, in second-growth forests, thickets, etc., usually very common. Burma, Formosa, Malay Peninsula, Sumatra, Java, Borneo, Timor, Celebes.

Local names: Anagas (P. Bis.); alitagtag (Bik.); anan (Mang., P. Bis.); anam (Bis.); anugas (C. Bis.); anténg (Ilk.); araká (Ibn.); bagilíbas (Tag.); bahai-uhod (Tag.); baláñga (P. Bis.); baliñgásai (Ilk., Tag., Sbl.); balinghásai (Tag.); baliñgóhot (Bik.); balinhásai (Ibn., Ilk., Tag., Ig.); balinhái (Sbl.); balinsúd (Mang.); baliohod (Bik.); balitántang (Tag.); balithód (Tag.); balunug (Sul.); beobayanó (C. Bis.); boróan (Pang.); bulúan (Pang.); butu-butu (C. Bis.); diláan (Sul.); gañgá (Ibn.); garantang (Tagb.); hiñgas (Tag.); kalampuso (Bik.); kalíppo (Sub.); kamiing (Sbl.); kaming (Pang., Tag.); kanteng (Ting.); kasabang (Neg.); lagindiñgan (Mag.); maguliok (Tag.); malabalúno (Sul.); malaybóhod (Tag.); maománga (Sml.); manbalúno (Sul.); pakarar (Pang.); pasig (Bis.); páuan (Ilk.); rangás (Ilk.); tagangtáng (P. Bis.); tarangnisig (Bag.) upong-upong (Bik.); unkan (P. Bis.); uyok (Ig.).

BUCHANANIA MICROPHYLLA Engl. in DC. Monog. Phan. 4 (1883) 185; Vidal Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 100; Perk. Frag. Fl. Philip. (1904) 24.

Luzon (Ilocos Norte, Ilocos Sur, Pangasinan, Zambales, Nueva Ecija, Pampanga), Palawan, Guimaras, *Cuming 1125, Merrill 2954; 1756, F. B. 23858, 26481 Paraiso, 22988 Adduru, 8219, 8297 Curran & Merritt, 24140 Tungol, 17680 Curran, 27851 Eden, B. S. 27358 Ramos*. On dry slopes in thickets and second-growth forests at low altitudes. Endemic.

Local names: Dodokdóken (Ilk.); kalapíni (Tag.); langlañgós (Ilk.); malakok (Pamp.); palilin (Sbl.); palinlín (Tag.); paminlín (Sbl.); panninglón (Sbl.); pau (Pang.); passi (P. Bis.); riñgás (Ilk.).

BUCHANANIA NITIDA Engl. in DC. Monog. Phan. 4 (1883) 193; Vidal Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 100; Perk. Frag. Fl. Philip. (1904) 24.

Luzon (Tayabas, Laguna, Rizal, Camarines, Sorsogon), Mindoro, Polillo, Samar, Biliran, Leyte, Masbate, Mindanao (Agusan), *Cuming 1703, Merrill*

2753, *Phil. Pl.* 1617, *Loher* 5860, *Warburg* 13289, *F. B.* 10402 *Curran*, 21434 *Alvarez*, *B. S.* 20982, 23849 *Ramos*, *Elmer* 16715, 18245, 15629, 15309 as *B. conglomerata* Elm. In primary forests at low altitudes. Endemic.

Local names: Anam (Tag.); balitangtang (Tag.); liok (Tag.); lubi-lubí (P. Bis.); managas (Mbo.); talagabanug (Mbo.).

BUCHANANIA PLATYPHYLLA Merr. in *Philip. Journ. Sci.* 10 (1915) Bot. 33.

Luzon (Cagayan, Tayabas), Mindanao (Lanao, Davao, Misamis, Zamboanga, Cotabato), Basilan, *F. B.* 20274 *Miranda*, 27531 *De Mesa*, 21894 *Villamil*, 22749 *Nave*, 11772 *Whitford*, *B. S.* 16356 *Reillo*, 36818 *Ramos & Edaño*, *Williams* 2879. In forests at low altitudes. Endemic.

Local names: Arangás (Ibn.); gayonatao (Sub.); lingabunú (Sul.); malambalúno (Sul.); manguian (Lan.); muntaga (Tagk.); pálang (Ibn.); papagan (Ibn.); sambrit (Neg.).

BUCHANANIA PSEUDOFLOIDA Perk. *Frag. Fl. Philip.* (1904) 24.

Buchanania florida Schauer var. *cumingii* Engl. in DC. *Monog. Phan.* 4 (1883) 190; *Vidal Phan. Cuming. Philip.* (1885) 106, *Rev. Pl. Vasc. Filip.* (1886) 100; Merr. in *Govt. Lab. Publ. (Philip.)* 35 (1906) 74.

Luzon (Ilocos Sur, Pangasinan, Zambales, Tayabas), *Cuming* 1115, *Merrill* 2061, 1989, 2055, 2064, 2134, *F. B.* 8301 *Curran & Merritt*, 11048 *Zschokke*. In dry open forests, usually second-growth type at low altitudes. Endemic.

Local names: Balayohod (Tag.); balingahud (Tag.); balinghánai (Sbl.); baliohod (Tag.); hupong-hupong (P. Bis.); tagantag (Tag.).

EXCLUDED SPECIES

BUCHANANIA LATIFOLIA Roxb.; F.-Vill. *Novis. App.* (1880) 55.

BUCHANANIA LUCIDA Blume; F.-Vill. l. c.

BUCHANANIA POLYBOTRYA Miq.; F.-Vill. l. c.

2. MANGIFERA Linnaeus

MANGIFERA ALTISSIMA Blanco *Fl. Filip.* (1837) 181, ed. 2 (1845) 129, ed. 3, 1 (1877) 230; Blume *Mus. Bot. Lugd.-Bat.* 1 (1850) 199; *Miq. Fl. Ind. Bat.* 1² (1858-59) 632; Engl. in DC. *Monog. Phan.* 4 (1883) 214; Merr. in *Govt. Lab. Publ. (Philip.)* 17 (1904) 27, 27 (1905) 35, *Philip. Journ. Sci.* 1 (1906) *Suppl.* 84; *Sp. Blancoanae* (1918) 232.

Mangifera longipes F.-Vill. *Novis. App.* (1880) 54, non Griff.

Buchanania reticulata Elm. *Leaf. Philip. Bot.* 4 (1912) 1499.

Luzon (Cagayan, Ilocos Sur, Zambales, Nueva Ecija, Bataan, Rizal, Laguna, Tayabas, Camarines), Mindoro, Sibuyan. Common in primary forests at low altitudes. Endemic.

Local names: Appán (Ibn.); bunutan (Neg.); banítan (Ibn.); malapáho (Tag., P. Bis.); manga-poli (Sub.); pahahútan (Tag.); páho (Tag., Bik., P. Bis.); pahohótan (Tag.); pahótan (Tag.); pahútan (Sbl., Tag.); pahuhútan (Tag., Bik.); pañgahútan (Tag.); pangmanggaén (Ilk.); páo (Sbl.); popouan (Pamp.).

MANGIFERA CAESIA Jack in Roxb. Fl. Ind. 2 (1824) 441; Hook. f. Fl. Brit. Ind. 2 (1876) 19; F.-Vill. Novis. App. (1880) 54; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 33; Perk. Frag. Fl. Philip. (1904) 25; Engl. in DC. Monog. Phan. 4 (1883) 213.

Mangifera verticillata C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 337.

Mindanao (Surigao, Agusan, Misamis, Zamboanga), Basilan. Semi-cultivated and in forests at low altitudes, apparently indigenous. Malay Peninsula, Sumatra, Java, Borneo.

Local names: Baúnu (Sul.); baluno (Mbo.); balúnut (Sul.); baúno (C. Bis.); bayóno (C. Bis.); bayúno (C. Bis.); malóno (Mbo.); lóno (Mbo.).

MANGIFERA INDICA Linn. Sp. Pl. (1753) 200; Miq. Fl. Ind. Bat 1^a (1858-59) 628; Blanco Fl. Filip. (1837) 179, ed. 2 (1845) 127, ed. 3, 1 (1877) 229; Engl. in DC. Monog. Phan. 4 (1883) 199; F.-Vill. Novis. App. (1880) 54; Vidal Sinopsis Atlas (1883) 22, t. 36, f. D, Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 99; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 84, 3 (1908) Bot. 80, Fl. Manila (1912) 300, Sp. Blancoanae (1918) 232. *Mangifera rostrata* Blanco Fl. Filip. ed. 2 (1845) 129, ed. 3, 1 (1877) 231, t. 62.

Mangifera anisodora Blanco op. cit. 129, 229.

Mangifera sylvatica F.-Vill. Novis. App. (1880) 54, non Roxb.

Mangifera fragrans F.-Vill. l. c., non Maingay.

Cultivated, and in deserted cultivation throughout the Philippines, introduced. Indo-Malayan region in general cultivation, now planted in all tropical countries. Mango.

Local names: Mampalam (Sul.); mampalang (Sul.); mánga (Ilk., Tag., Ig., Mag.); manga chupadera (Sp.); maṅgang-kalabáu (Tag.); maṅgang-piko (Tag.); páo (Bon.); mángka (Ig.); páho (C. Bis.).

MANGIFERA LONGIPES Griff. Notul. 4 (1854) 419; Engl. in DC. Monog. Phan. 4 (1883) 201.

Palawan, *F. B. 27904 Cenabre, Baldemor, & Aduviso*. In forests at low altitudes. Malay Peninsula, Sumatra, Java.

Local name: Apali (Tagb.).

MANGIFERA MONANDRA Merr. in Govt. Lab. Publ. (Philip.) 17 (1904) 28.

Luzon (Ilocos Norte, Pangasinan, Zambales, Bataan, Rizal, Laguna, Camarines), Ticao, Samar, Leyte. In primary forests at low altitudes. Endemic.

Local names: Kalamansánai (Tag.); kárig (Tag.); kurig (Sbl.); malapáho (Bik.); paglumbáyan (Ilk.); pagsagon (S. L. Bis.); paglumbóyen (Pang.); páo (Ilk.); pounan (S. L. Bis.).

MANGIFERA ODORATA Griff. Notul. 4 (1854) 417; Hook. f. Fl. Brit. Ind. 2 (1876) 17; F.-Vill. Novis. App. (1880) 54; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 33.

Balabac, Mindanao (Zamboanga), Basilan, Jolo, cultivated or semi-cultivated, introduced from Malaya.

Local names: Huaní (Bis.); kandopi (Sul.); uani (Sul., C. Bis.).

MANGIFERA PARVIFOLIA Merr. in Philip. Journ. Sci. 20 (1922) 401.

Luzon (Zambales), Merrill 2946, *F. B.* 27169 Maneja & Bawan. In forests at low altitudes. Endemic.

DOUBTFUL AND EXCLUDED SPECIES

MANGIFERA FOETIDA Lour.; F.-Vill. Novis. App. (1880) 54; Usteri Beitr. Ken. Philip. Veg. (1905) 114.

The specimen cited by Usteri was from Malabon, near Manila, and unquestionably represents *M. indica* Linn., the only species of the genus that occurs in the settled areas of Luzon.

MANGIFERA LAGENIFERA Griff.; Perk. Frag. Fl. Philip. (1904) 25.

The specimen so named by Perkins is *Buchanania arborescens* Blume.

MANGIFERA LAURINA Blume; F.-Vill. Novis. App. (1880) 54.

MANGIFERA SIMILIS Blume; F.-Vill. l. c.

MANGIFERA SUMATRANA Miq.; F.-Vill. l. c.

MANGIFERA PINNATA Blanco Fl. Filip. (1837) 182, ed. 3, 1 (1877) 231; F.-Vill. Novis. App. (1880) 54; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 36, Sp. Blancoanae (1918) 383, non Linn. f.

The status of the form Blanco described is indeterminable from his imperfect description; he excluded the species in the second edition of his *Flora de Filipinas*.

3. ANACARDIUM Linnaeus

ANACARDIUM OCCIDENTALE Linn. Sp. Pl. (1753) 383; Miq. Fl. Ind. Bat. 1² (1858-59) 624; F.-Vill. Novis. App. (1880) 54; Engl. in DC. Monog. Phan. 4 (1883) 219; Vidal Sinopsis Atlas (1883) 22, t. 36, f. B, Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 100; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 84, Fl. Manila (1912) 299, Sp. Blancoanae (1918) 233.

Cassuvium reniforme Blanco Fl. Filip. (1837) 322, ed. 2 (1845) 227, ed. 3, 2 (1878) 60, t. 116.

Throughout the Philippines in the settled areas at low and medium altitudes, cultivated and in places naturalized or at least persistent after abandoned cultivation. Introduced from tropical America in the early colonial period, now pantropic. Cashew.

Local names: Balógo (Ilk.); balubad (Tag.); balúbag (Tag.); balúbar (Tag.); balúbat (Tag.); batúbán (Tag.); bolúgo (Ilk.); kachúi (Tag.); kasói (Ibn., Tag.); kasúi (Ilk., Tag.); kasul (Sul.); kológo (Ilk.); kosing (Ig.); sambalduke (Ilk.).

4. SWINTONIA Griffith

SWINTONIA ACUMINATA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 35.

Luzon (Camarines), Panay, *F. B.* 21749 Fischer, 21232 Alvarez, 21729 Peñas, Soriano, & Abellanosa. In forests at low altitudes. Endemic.

SWINTONIA FOXWORTHYI Elm. Leaf. Philip. Bot. 5 (1913) 1752.

Palawan, *Elmer* 12982, 13155, *F. B.* 23339 Danao. In forests, altitude 200 to 600 m. Endemic.

Local name: Lomarau (Kuy.).

SWINTONIA LUZONIENSIS Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 109.

Luzon (Tayabas, east coast), *Merrill 1057*. In forests at low altitudes. Endemic.

Local name: Kaluis (Tag.).

5. KOORDERSIODENDRON Engler

KOORDERSIODENDRON PINNATUM (Blanco) Merr. in Philip. Bureau Forestry Bull. 1 (1903) 33, Govt. Lab. Publ. (Philip.) 35 (1906) 73, Philip. Journ. Sci. 1 (1906) Suppl. 85, Sp. Blancoanae (1918) 234.

Helicteres pinnata Blanco Fl. Filip. (1837) 384.

Cyrtocarpa quinquestyla Blanco op. cit. ed. 2 (1845) 269, ed. 3, 2 (1878) 135.

Koordersiodendron celebicum Engl. ex Koord. in Meded. Lands Plantent. 19 (1898) 410; Boerl. in Ic. Bogor. 1 (1901) 55, t. 94-96; Perk. Frag. Fl. Philip. (1904) 25.

Odina speciosa F.-Vill. Novis. App. (1880) 55; Vidal Rev. Pl. Vasc. Filip. (1886) 101 (var. *multijuga*) 101, Phan. Cuming. Philip. (1885) 106; Engl. in DC. Monog. Phan. 4 (1883) 274, quoad Philip., non Blume.

Odina multijuga Vidal Sinopsis Atlas (1883) 22, t. 37, f. A.

Lannea speciosa Perk. Frag. Fl. Philip. (1904) 26, in nota, non Engl.

Northern Luzon (Cagayan) to Mindanao. Common in primary forests at low altitudes. Borneo, Celebes, New Guinea. A monotypic genus.

Local names: Amúgis (Tag., Bik., C. Bis.); ambúgis (Tag.); bangkási (Ilk.); bangkalári (Ilk.); dangila (Tag.); gagil (Sul.); kalumanog (Bis.); kantínġen (Ilk.); karogkog (Bik.); lako-lako (Bis.); magalíbas (Sul.); maguyabud (Mbo., Mand.); múgis (Tag.); orís (Ilk.); sambuláuan (S. L. Bis., P. Bis., C. Bis.); sambuláuan (P. Bis.); sambalágan (Bis.); sárga (Ilk.); sambalabúan (Bis.); sambuaáuan (Mbo.); sinambuaóan (C. Bis.); taligáan (Ilk.); urís (Ilk.); urisán (Ilk., Ibn.).

6. SPONDIAS Linnaeus

SPONDIAS PINNATA (Linn. f.) Kurz in Pegu Report. (1875) A 44; Merr. Interpret. Herb. Amb. (1917) 332, Sp. Blancoanae (1918) 233.

Mangifera pinnata Linn. f. Suppl. (1781) 156.

Evia amara Commers. ex Blume Mus. Bot. Lugd.-Bat. 1 (1850) 234.

Poupartia pinnata Blanco Fl. Filip. (1837) 392, ed. 2 (1845) 274, ed. 3, 2 (1878) 146.

Spondias mangifera Willd. Sp. Pl. 2 (1799) 751; Engl. in DC. Monog. Phan. 4 (1883) 248; F.-Vill. Novis. App. (1880) 55; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 84.

Luzon (Cagayan, Bataan, Laguna, Tayabas, Sorsogon), Catanduanes, Mindoro, Culion, Panay, Mindanao (Agusan, Cotabato, Zamboanga, Butuan, Davao). In primary forests at low altitudes. India to Celebes and the Moluccas.

Local names: Adúas (Tag.); alambihód (C. Bis.); alubihód (Bis.); alubihon (Tag.); alubuid (Kuy.); baliud (Tagk.); kalabahid (Mbo.); lannó (Ibn.); lannu (Neg., Ibn.); libás (Tag., P. Bis., Sul., Mag.); lubas (Bik.).

SPONDIAS PURPUREA Linn. Sp. Pl. ed. 2 (1762) 613; Engl. in DC. Monog. Phan. 4 (1883) 243; F.-Vill. Novis. App. (1880) 55; Vidal Sinopsis Atlas (1883) 22, *t. 27, f. B*; Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 22, Fl. Manila (1912) 301, Sp. Blancoanae (1918) 233.

Spondias dulcis Blanco Fl. Filip. (1837) 390, ed. 2 (1845) 273, ed. 3, 2 (1878) 143, *t. 132*; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 36; Usteri Beitr. Ken. Philip. Veg. (1905) 114, non Linn. *Spondias lutea* Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 22, Philip. Journ. Sci. 1 (1906) Suppl. 84; ? F.-Vill. Novis. App. (1880) 55, non Linn.

Luzon (Abra, Pangasinan, Pampanga, Bataan, Rizal, Cavite, Laguna), Palawan, and doubtless in other islands and provinces; cultivated for its edible fruit. Introduced from tropical America by the Spaniards, now pantropic in cultivation.

Local names: Saguélas (Ilk.); saraguélas (Ibn.); sarguélas (Ilk.); sereguélas (C. Bis.); sineguélas (Tag.); siriguélas (Bik.); sirihuélas (Tag.); (all corruptions of the Sp. ciruela = plum).

7. DRACONTOMELUM Blume

DRACONTOMELUM DAO (Blanco) Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 108; Merr. Sp. Blancoanae (1918) 234.

Paliurus dao Blanco Fl. Filip. (1837) 174, ed. 2 (1845) 122, ed. 3, 1 (1877) 219.

Dracontomelum mangiferum F.-Vill. Novis. App. (1880) 56; Vidal Sinopsis Atlas (1883) 22, *t. 37, f. D*; Perk. Frag. Fl. Philip. (1904) 26; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 84, non Blume.

Dracontomelum celebicum Koord. Meded. Lands. Plant. 19 (1898) 410.

Luzon (Cagayan to Sorsogon), Mindoro, Palawan, Samar, Leyte, Negros, Mindanao (Agusan, Lanao, Cotabato incl. *Elmer 15289* as *Santiria luzonensis* Elm.). Common in forests at low altitudes. Celebes, Moluccas.

Local names: Anduong (Mbo.); batuan (Bis.); dáo (Tag., Bik., P. Bis., S. L. Bis.); habas (C. Bis.); hamáarak (Ilk.); kamáarak (Ilk.); kiakia (S. L. Bis.); lupígi (Ibn.); makadaég (Ilk.); makau (Mbo., Mag.); mamakau (Mbo., Bag.); maliyau (Tag.).

DRACONTOMELUM EDULE (Blanco) Skeels in U. S. Dept. Agr. Bur. Pl. Ind. Bull. 261 (1912) 52.

Paliurus edulis Blanco Fl. Filip. (1837) 173.

Paliurus lamiyo Blanco Fl. Filip. ed. 2 (1845) 122, ed. 3, 1 (1877) 218 pro majore parte.

Comeurya cumingiana Baill. Adansonia 10 (1872) 330.

Dracontomelum cumingianum Baill. ex Engl. in DC. Monog. Phan. 4 (1883) 254; Vidal Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 101; Perk. Frag. Fl. Philip. (1904) 25; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 84, Govt. Lab. Publ. (Philip.) 27 (1906) 36.

Dracontomelum lamiyo Merr. Sp. Blancoanae (1918) 234.

Luzon (Bataan, Rizal, Bulacan, Batangas, Laguna, Tayabas, Camarines, Sorsogon), Tablas, Samar, Mindanao (Cotabato). Common in primary forests at low altitudes. Endemic.

Local names: Adúas (Tag.); alauíhau (Bik., S. L. Bis.); anangging-putí (Tag.); batoan (Bis.); bili-bili (P. Bis.); bio (Pang.); halauíhau (Bik.); lámio (Tag.); malaiyo (Tag.); ulandang (Kuy.).

DRACONTOMELUM SYLVESTRE Blume Mus. Bot. 1 (1850) 231; Engl. in DC. Monog. Phan. 4 (1883) 252.

Dracontomelum edule Merr. in Philip. Journ. Sci. 10 (1915) Bot. 33, non Skeels (1912).

Luzon (Sorsogon), Leyte, Palawan, Basilan, Mindanao (Surigao), *Merrill 9391, Wenzel 1754, Elmer 15610, Bolster 350, F. B. 25752 Natividad*. In primary forests at low altitudes. Borneo.

Local names: Ulandúg (Kuy.); olandág (Tagb.).

8. PLEIOGYNIUM Engler

PLEIOGYNIUM SOLANDERI (Benth.) Engl. in DC. Monog. Phan. 4 (1883) 255; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 284.

Spondias solanderi Benth. Fl. Austral. 1 (1863) 492.

Spondias pleiogyna F.-Muell. Fragm. 4 (1864) 78.

Luzon (Rizal), *F. B. 3163, 2166 Ahern's collector*. In forests at medium altitudes. Tropical Australia and Polynesia. A monotypic genus.

9. PHLEBOCHITON Wallich

PHLEBOCHITON PHILIPPINENSE (Elm.) comb. nov.

Pegia philippinensis Elm. Leaf. Philip. Bot. 8 (1919) 3100.

Luzon (Laguna), Mindoro, Samar, Leyte, Mindanao (Agusan), *Elmer 13467, 17913, F. B. 12756 Rosenbluth, 11384 Merritt, 26770, 26351, 24068 Mabesa, B. S. 17423, 15130 Ramos*. In primary forests at low altitudes. Also in Sumatra, fide Hallier f. in lit. June 21, 1913.

10. PISTACIA Linnaeus

PISTACIA CHINENSIS Bunge in Mém. Acad. Sci. St. Pétersb. 2 (1833) 89; Engl. in DC. Monog. Phan. 4 (1883) 291; Rehd. & Wils. in Sargent Pl. Wils. 2 (1914) 173.

Pistacia formosana Mats. in Bot. Mag. Tokyo 15 (1901) 40; Mats. & Hayata in Journ. Col. Sci. Tokyo 22 (1906) 99, t. 9.

Pistacia philippinensis Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 107, 5 (1910) Bot. 357.

Luzon (Benguet), *Loher 437, F. B. 5093, 10920, 10919, 10899 Curran, 24687 Peña, Sandkuhl 274*. On open slopes, altitude 700 to 1,000 m. North-central China to southern China and Formosa.

Local names: Agiao (Ilk.); sanído (Ig.); sañgído (Ig.); sañgílo (Ig.).

11. PARISHIA Hooker f.

PARISHIA MALABOG Merr. in Philip. Journ. Sci. 7 (1912) Bot. 281.

Luzon (Tayabas), Mindoro, Ticao, Masbate, Sibuyan, Tablas, Negros, Cebu, Sibutu, *F. B. 25620 Medina, 12530, 12540 Rosenbluth, 22588 Cortes, B. S. 11109 Ramos*. On forested slopes at low altitudes. Endemic.

Local names: Buŕkan (Tag.); bulábog (Sul., P. Bis.); kupang-kúpang (P. Bis.); malábog (P. Bis.); malábol (P. Bis.); mulábu (P. Bis.); mulábug (C. Bis.); malibog (P. Bis.).

PARISHIA OBLONGIFOLIA Merr. in Philip. Journ. Sci. 14 (1919) 413.

Panay, Sibuyan, *B. S. 31044 Ramos & Edaño, 32219 McGregor, F. B. 27040 Sajor*. In forests, ascending to 900 in altitude. Endemic.

Local name: Bulábog (P. Bis.).

12. RHUS Tournefort

RHUS TAITENSIS Guill. in Ann. Sci. Nat. II 7 (1837) 361.

Rhus simarubifolia A. Gray Bot. Wilkes. U. S. Explor. Exped. (1854) 367, t. 44; Engl. in DC. Monog. Phan. 4 (1883) 450; Vidal Rev. Pl. Vasc. Filip. (1886) 99, Phan. Cuming. Philip. (1885) 105 [var. *taitensis* (Guill.) Engl.].

Leyte, Mindanao (Bukidnon, Lanao, Davao), *Cuming 1857, Elmer 11914, 11118, Clemens 1151, B. S. 26083 Fénix, 21400 Escritor*. In thickets or forests at low and medium altitudes. Polynesia.

Local names: Biro (Bag.); magasorod (Bag.).

13. SEMECARPUS Linnaeus f.

SEMECARPUS CUNEIFORMIS Blanco Fl. Filip. (1837) 220, ed. 2 (1845) 155, ed. 3, 1 (1877) 276, t. 75; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 279, Fl. Manila (1912) 299, Sp. Blancoanae (1918) 235.

Semecarpus anacardium Blanco op. cit. 216, 152, 275, non Linn. f.

Semecarpus perrottetii March. Rev. Anac. (1869) 169; Engl. in DC. Monog. Phan. 4 (1883) 480; Vidal Rev. Pl. Vasc. Filip. (1886) 101; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 33; Perk. Frag. Fl. Filip. (1904) 28.

Semecarpus pubescens F.-Vill. Novis. App. (1880) 55, non Thw.

Semecarpus sideroxyloides Perk. Frag. Fl. Philip. (1904) 28.

Anacardium longifolium Lam. Encycl. 1 (1783) 139, quoad Philip. non *Semecarpus longifolia* Blume.

Luzon (Cagayan, Ilocos Norte, Bontoc, Union, Pangasinan, Zambales, Bataan, Nueva Ecija, Rizal, Pampanga, Bulacan, Laguna, Tayabas, Sorsogon), Mindoro, Palawan, Leyte, Negros, Guimaras. Common in dry thickets and second-growth forests at low altitudes. Endemic.

Local names: Agás (P. Bis.); anagás (P. Bis.); hanagas (Bis.); inŕgas (Bik.); kamiing (Sbl.); kamíng (Pamp., Tag.); kamíding (Ig.); kamíling (Ting.); kamíring (Ibn., Ilk.); libás (Bon.); lanŕgas (Bis.); loñŕgas (C. Bis.); ligás (Tag., Pamp.); pakan (Bon.).

Lamarck's specimen of *Anacardium longifolium* in the Paris herbarium is the same as *Semecarpus perrottetii* March. fide Lecomte in lit.

SEMECARPUS ELMERI Perk. Frag. Fl. Philip. (1904) 26.

Mindoro, Guimaras, Negros, *Merrill 923, 1176, F. B. 248 Gammil, 17445 Curran*. In dry forests at low altitudes. Endemic.

Local names: Anagás (P. Bis.); libás (P. Bis.); ligás (Tag.).

SEMECARPUS EUPHLEBIA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 283.

Luzon (Tayabas), *B. S. 13163 Foxworthy & Ramos*. In forests at low altitudes. Endemic.

SEMECARPUS FERRUGINEA Merr. in Philip. Journ. Sci. 14 (1919) 412.

Panay, Negros, *B. S.* 30756 *Ramos & Edaño, Piper 24*. On forested slopes. Endemic.

SEMECARPUS GIGANTIFOLIA Vidal Sinopsis Atlas (1883) 22, *t.* 36, *f.* A; F.-Vill. Novis. App. (1883) 350; Ceron. Cat. Pl. Herb. Manila (1892) 57, Merr. in Philip. Bureau Forestry Bull. 1 (1903) 33, Govt. Lab. Publ. (Philip.) 6 (1904) 5, Philip. Journ. Sci. 1 (1906) Suppl. 85, *Sp. Blancoanae* (1918) 21; Perk. Frag. Fl. Philip. (1904) 26.

Luzon (Cagayan, Lepanto, Benguet, Bulacan, Bataan, Rizal, Laguna, Tayabas, Camarines), Mindoro, Mindanao (Zamboanga) *B. S.* 2161, 14531, 22277, 26223 *Ramos, 34050 Ramos & Edaño, Elmer 8902, 17495, Merrill 2491*. In forests at low altitudes. Endemic.

Local names: Anagás (Tag.); anagás-babáe (Tag.); isip (Ign.); libás (Bik.); ligás (Tag.); manalú (Sul.); topo (Bik.).

SEMECARPUS GLAUCIPHYLLA Elm. Leaf. Philip. Bot. 4 (Apr. 20, 1912) 1501.

Semecarpus acuminatissima Merr. in Philip. Journ. Sci. 7 (Nov. 15, 1912) Bot. 282.

Babuyan Islands, Luzon (Cagayan, Zambales, Tayabas, Laguna), Sibuyan, Samar, Mindanao (Davao, Agusan), *Elmer 12276, B. S.* 5058, 19428, 13241 *Ramos, 25591 Yates, F. B.* 26724, 26685 *Peñas, 23674 Razon, 28209 Elumir, Merrill Phil. Pl.* 1642. In forests at low altitudes. Endemic.

Local name: Masukal (Tag.).

SEMECARPUS LANCEOLATA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 284.

Batan Islands, Luzon (Abra, Cagayan), *B. S.* 7083 *Ramos, F. B.* 26676 *Peñas*. In forests at low altitudes. Endemic.

Local names: Añás (Iv.); kamíring (Ilk.).

SEMECARPUS MACROTHYRSA Perk. Frag. Fl. Philip. (1904) 26.

Luzon (Tayabas), *Merrill 2447*. In forests at low altitudes. Endemic.

Local name: Ligás (Tag.).

SEMECARPUS MEGABOTRYS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 285.

Semecarpus pilosa Merr. op. cit. 287.

Luzon (Isabela, Union, Ilocos Norte, Nueva Ecija, Nueva Vizcaya), *F. B.* 18536, 22359 *Alvarez, 21781 Velasco, B. S.* 11435 *McGregor, 27314 Ramos, 2331 Mearns*. In forests at low altitudes. Endemic.

Local names: Bihi (Ig.); kamáing (Pang.); polánto (Ilk.).

SEMECARPUS MERRILLIANA Perk. Frag. Fl. Philip. (1904) 27.

Mindoro, Palawan, Mindanao (Zamboanga), *Merrill 851, F. B.* 8649, 11393 *Merritt, Williams 2872*. In forests at low altitudes. Endemic.

Local names: Bugnau (Sul.); inás (Sul.); inǵás (Sul.); ligás (Tag.); lukti-lukti (Sul.); nagás (Kuy.).

SEMECARPUS MICRANTHA Perk. Frag. Fl. Philip. (1904) 27; Merr. in Philip. Journ. Sci. 7 (1912) Bot. 290.

Semecarpus taftiana Perk. op. cit. 28.

Palawan, *Merrill 709, 734, Elmer 12994*. In thickets and second-growth forests at low altitudes. Endemic.

SEMECARPUS OBTUSATA Elm. Leaf. Philip. Bot. 5 (1913) 1752.

Palawan, *Elmer 13003*. On forested river banks, altitude about 225 m. Endemic.

SEMECARPUS OBTUSIFOLIA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 286.

Balabac, Panay, Cebu, *B. S. 512 Mangubat, 30747 Ramos & Edaño, 11042 Ramos*. In forests at low altitudes. Endemic.

SEMECARPUS PAUCINERVIA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 286.

Palawan, *B. S. 750 Foxworthy*. In forests along streams, altitude about 100 m. Endemic.

SEMECARPUS PHILIPPINENSIS Engl. in DC. Monog. Phan. 4 (1883) 481; Vidal Phan. Cuming. Philip. (1885) 106, Rev. Pl. Vasc. Filip. (1886) 101; Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 75, Philip. Journ. Sci. 7 (1912) Bot. 290.

Semecarpus perrottetii March. var. *glabra* March. Rev. Anac. (1869) 170.

Semecarpus albescens Vidal Phan. Cuming. Philip. (1885) 106, Rev. (1886) 101; Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 75, Pl. Vasc. Filip. (1886) 101; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 85; Engl. in DC. Monog. Phan. 4 (1883) 488, quoad Philip., non Kurz.

Luzon (Abra, Benguet, Ilocos Sur, Pampanga, Bulacan, Bataan, Laguna), Cebu, Leyte, Mindanao (Misamis), *Cuming 1146, 71776, Elmer 6447, F. B. 25461 Paraíso, 27195 Udasco, 17564, 17669 Curran, 337 Barnes, 674, 708, 1193 Borden, 2777 Meyer*. In forests at low altitudes. Endemic.

Local names: Duñgás (C. Bis.); kamiling (Ting.); kaming (Tag.); kamíring (Ilk.); libás (Tag.); ligás (Tag.); malamánnga (Pamp.).

SEMECARPUS SUBSESSILIFOLIA Merr. in Philip. Journ. Sci. 14 (1919) 411.

Panay, *B. S. 30711 Ramos & Edaño*. In forests at low or medium altitudes. Endemic.

SEMECARPUS SURIGAENSIS Merr. in Philip. Journ. Sci. 16 (1920) 272.

Mindanao (Surigao), *B. S. 34772 Ramos & Pascasio*. In forests along streams at low altitudes. Endemic.

SEMECARPUS WHITFORDII Merr. in Philip. Journ. Sci. 7 (1912) Bot. 288.

Leyte, Panay, Mindanao (Zamboanga, Davao), *F. B. 11774 Whitford, 27469, 27574 De Mesa, B. S. 31072, 30870, 36981 Ramos & Edaño, Wenzel 1756, 1721*. In forests at low altitudes. Endemic.

Local names: Dañgá (Bag.); britá (Sub.).

EXCLUDED SPECIES

SEMECARPUS HETEROPHYLLA Blume; F.-Vill. Novis. App. (1880) 55.

SEMECARPUS MICROCARPA Wall.; F.-Vill. l. c.

14. ONCOCARPUS A. Gray

ONCOCARPUS DENSIFLORA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 191.

Luzon (Sorsogon), Samar, *B. S. 24646 Ramos, Elmer 15485, 16272, 17214* as *O. peninsula* Elm. In forests at low altitudes. Endemic.

Local name: Matapok (S. L. Bis.).

ONCOCARPUS MACROPHYLLA (Merr.) C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 340.

Semecarpus macrophylla Merr. in Philip. Bureau Forestry Bull. 1 (1903) 33.

Mindanao (Surigao), *Ahern 348, 529*. In forests. Endemic.

ONCOCARPUS OBOVATA (Elm.) Merr. in Philip. Journ. Sci. 14 (1919) 413.

Dichapetalum obovatum Elm. Leaf. Philip. Bot. 2 (1908) 483.

Luzon (Tayabas, Laguna), *Elmer 7931*, distributed as *Pterospermum*, *Quisumbing 1346*. In forests, altitude about 750 m. Endemic.

ONCOCARPUS TRACHYPHYLLA (Perk.) comb. nov.

Semecarpus trachyphylla Perk. Frag. Fl. Philip. (1904) 29.

Oncocarpus ferruginea C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 340.

Luzon (Cagayan, Ilocos Norte, Pangasinan, Bataan, Rizal, Tayabas), Samar, Mindanao (Agusan, Davao), *Warburg 11796, Williams 580, Ahern 746, F. B. 3173 Ahern's collector, 15085, 24278 Bernardo, 25557 Vargas, 26021 Cailipan, 10748 Curran, 2422 Meyer, 2388 Borden, B. S. 1507, 32993 Ramos*. In primary forests at low altitudes. Endemic.

Local names: Arañgás (Tag.); kamirig (Ilk.); lígas (Bag.); mala-lígas (Tag.); nugas (S. L. Bis.); uagotomak (Mbo.).

EXCLUDED GENUS

CAMPNOSPERMA AURICULATA Hook. f.; F.-Vill. Novis. App. (1883) 351.

CAMPNOSPERMA MACROPHYLLA Hook. f.; F.-Vill. l. c.

AQUIFOLIACEAE

1. ILEX Linnaeus

ILEX ANTONII Elm. Leaf. Philip. Bot. 5 (1913) 1666.

Mindanao (Davao), *Elmer 11348*. In dense thickets on high exposed ridges, altitude about 2,400 m. Endemic.

Local name: Masaliksik (Bag.).

ILEX APOENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1667.

Mindanao (Davao), *Elmer 11449, 11408*. In the mossy forest, altitude about 2,100 m. Endemic.

To be compared critically with *Ilex pulogensis* Merr., to which it is closely allied.

Local name: Marintok (Bag.).

ILEX ASPRELLA (Hook. & Arn.) Champ. ex Benth. in Hook. Kew Journ. Bot. 4 (1852) 329; Benth. Fl. Hongk. (1861) 65; Loesen. in Nov. Act. Deutsch. Akad. Naturf. 78 (1901) 477.

Prinos asprellus Hook. & Arn. Bot. Beechey Voy. (1841) 176, t. 36.

Ilex oxyphylla Miq. in Journ. Bot. Néerl. 1 (1861) 124.

Ilex gracilipes Merr. in Philip. Journ. Sci. 3 (1908) Bot. 237, 5 (1910) Bot. 358; Elm. Leaf. Philip. Bot. 5 (1913) 1664.

Ilex merrillii Briq. in Ann. Conserv. Jard. Bot. Genève 20 (1919) 421.

Luzon (Bontoc, Lepanto, Benguet, Zambales, Rizal, Bataan), Mindoro. Common in ravines in the Mountain Province, altitude 1,200 to 1,900 m; in Zambales, Rizal, and Bataan on exposed ridges, altitude 1,000 to 2,000 m. Southeastern China, Formosa.

Local names: Balasbas (Ig.); kalasan (Ig.); sagulisil (Ig.).

Merrill Phil. Pl. 881 is the type collection of *Ilex merrillii* Briq. It is identical with *Ilex gracilipes* Merr., which Loesener identifies as *Ilex asprella* Champ. After examining a large series of Philippine, Formosan, and Chinese specimens I can see no valid reason for distinguishing the Philippine form by name.

ILEX BRUNNEA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 318.

Luzon (Tayabas, Laguna), Mindanao (Bukidnon), *B. S. 19461 Ramos, 38906 Ramos & Edaño, F. B. 26774 Mabesa, 25026 Amarillas*. Epiphytic or pseudoepiphytic in primary forests, altitude 300 to 700 m. Endemic.

ILEX BUERGERI Miq. in Versl. Med. Akad. Wetensch. II 2 (1868) 84; Loesen. in Nov. Act. Deutsch. Akad. Naturf. 78 (1901) 329, var.

ROLFEI (Elm.) Loesen. ex Elm. Leaf. Philip. Bot. 5 (1913) 1664.

Ilex rolfei Elm. Leaf. Philip. Bot. 1 (1908) 314.

Ilex formosana C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 201, non Maxim.

Luzon (Bontoc, Benguet, Zambales, Tayabas), Mindoro, Mindanao (Bukidnon), *Elmer 8764, 8792, B. S. 5095, 5781 Ramos, 28657, 28764, 37770, 38721, 40633 Ramos & Edaño, Loher 5792, F. B. 8092 Curran & Merritt*. In ravines and on exposed forested ridges, altitude 1,400 to 1,800 m. Southern Japan.

ILEX CRENATA Thunb. Fl. Jap. (1784) 78, f. **LUZONICA** (Rolfe) Loesen. in Nov. Act. Deutsch. Akad. Naturf. 78 (1901) 201; Merr. in Philip.

Journ. Sci. 5 (1910) Bot. 358; Elm. Leaf. Philip. Bot. 5 (1913) 1664.

Ilex luzonica Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 309; Vidal Rev. Pl. Vasc. Filip. (1886) 87.

Eurya japonica Thunb. var. *parvifolia* Vidal Sinopsis Atlas (1883) t. 13, f. C.

Eurya myrtilloides Elm. Leaf. Philip. Bot. 1 (1908) 323.

Luzon (Lepanto, Benguet, Nueva Vizcaya, Nueva Ecija, Tayabas, Laguna, Camarines), Negros, Cagayan de Misamis, Mindanao (Davao). On exposed ridges, on the higher mountains often forming dense thickets, altitude 1,700 to 2,700 m. Japan, Riu Kiu Islands, a variety in the Himalayan region.

Local names: Kalatan (Ig.); gayauan (Bag.).

ILEX CURRANII Merr. in Philip. Journ. Sci. 17 (1920) 273.

Luzon (Benguet), *B. S.* 40432, 40403 *Ramos & Edaño*, *F. B.* 18069 *Curran*, *Merritt*, & *Zschokke*. In the mossy forest on Mount Pulog, altitude about 2,500 m. Endemic.

ILEX CYMOSA Blume Bijdr. (1826) 1149; Loesen. in Nov. Act. Deutsch. Akad. Naturf. 78 (1901) 74; Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 308; Vidal Rev. Pl. Vasc. Filip. (1886) 87; Elm. Leaf. Philip. Bot. 5 (1913) 1664.

Ilex philippinensis Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 308.

Luzon (Cagayan, Abra, Ilocos Norte, Nueva Vizcaya, Nueva Ecija, Zambales, Tayabas, Camarines), Mindoro, Leyte, Palawan, Sibuyan, Bucas Grande, Mindanao (Butuan, Lanao). Locally common in primary forests at low altitudes, ascending to 800 m. Burma, Malay Peninsula, Sumatra, Borneo, Java, Celebes.

Local names: Malagidia (Tag.); paít (Ilk.); saling-uák (P. Bis.).

Var. **CUMINGIANA** (Rolfe) Loesen. in Nov. Act. Deutsch. Akad. Naturf. 78 (1901) 76; Elm. Leaf. Philip. Bot. 5 (1913) 1664.

Ilex cumingiana Rolfe in Journ. Linn. Soc. Bot. 21 (1884) 308; Vidal Phan. Cuming. Philip. (1885) 103.

Luzon (Cagayan, Ilocos Norte, Nueva Vizcaya, Pangasinan, Tayabas), Palawan, *Cuming* 1241, *Adduru* 164, *Merrill* 1042, *B. S.* 4924 *Ramos*, 738 *Foxworthy*. In forests at low altitudes; scarcely distinguishable from the typical form. Endemic.

ILEX FLETCHERI Merr. in Philip. Journ. Sci. 2 (1907) Bot. 279; Elm. Leaf. Philip. Bot. 5 (1913) 1663.

Luzon (Benguet, Nueva Vizcaya, Tayabas), Mindoro, *Merrill* 5755, 5716, *F. B.* 4448, 4475, 18034 *Merritt*, 14886 *Darling*, *B. S.* 5728 *Ramos*, 28475, 28794 *Ramos & Edaño*. On exposed ridges, altitude 1,400 to 2,200 m; closely allied to *Ilex hanceana* Maxim., of southern China. Endemic.

ILEX FOXWORTHYI Merr. in Philip. Journ. Sci. 5 (1910) Bot. 193; Elm. Leaf. Philip. Bot. 5 (1913) 1663.

Luzon (Laguna, Tayabas, Sorsogon), *B. S.* 2416 *Foxworthy*, 26669 *Brown*, 17318 *Robinson & Brown*, *Merrill* 7522, *Elmer* 15657, 15844. In the mossy forest, altitude 1,400 to 2,100 m. Endemic.

ILEX GUERREROI Merr. in Philip. Journ. Sci. 10 (1915) Bot. 316; Elm. Leaf. Philip. Bot. 5 (1913) 1663.

Luzon (Rizal), *Guerrero*. In forests. Endemic.

ILEX HALCONENSIS (Merr.) Merr. in Philip. Journ. Sci. 5 (1910) Bot. 358; Elm. Leaf. Philip. Bot. 5 (1913) 1663.

Embelia halconensis Merr. op. cit. 2 (1907) 297.

Ilex apocensis Elm. var. *glandulosa* Elm. Leaf. Philip. Bot. 8 (1919) 3071.

Luzon (Laguna), Mindoro, Panay, Camiguin de Misamis, Mindanao (Bukidnon), *Merrill* 5771, *Phil. Pl.* 1195, *Elmer* 17624, *B. S.* 26659 *Brown*, 14459 *Ramos*, 30644, 30639 *Ramos & Edaño*, 26066 *Fénix*, *F. B.* 25727 *Mabesa*. On exposed ridges in the mossy forest, altitude 1,000 to 2,000 m. Endemic.

ILEX MICROTHYRSA Loesen. ex Elm. Leaf. Philip. Bot. 5 (1913) 1663.

Luzon (Zambales), Mindanao (Misamis), *B. S. 5081 Ramos, F. B. 4675 Mearns & Hutchinson*. On exposed ridges, altitude 1,800 to 2,400 m. Endemic.

ILEX PACHYPHYLLA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 318.

Luzon (Tayabas, east coast), *B. S. 9400 Robinson, 28579 Ramos & Edaño*. In the mossy forest, altitudes 900 to 1,000 m. Endemic.

ILEX PALAWANICA Loesen. ex Elm. Leaf. Philip. Bot. 5 (1913) 1664.

Palawan (Mt. Pulgar), *B. S. 555 Foxworthy*. In dense thickets on exposed ridges, altitude about 1,200 m. Endemic.

ILEX PAUCINERVIA Merr. in Philip. Journ. Sci. 17 (1920) 274.

Luzon (Nueva Ecija), *B. S. 26396 Ramos & Edaño*. In forests, altitude about 1,000 m. Endemic.

ILEX PULOGENSIS Merr. in Philip. Journ. Sci. 5 (1910) Bot. 358; Elm. Leaf. Philip. Bot. 5 (1913) 1664.

Luzon (Benguet), *F. B. 18099, 18145 Curran, Merritt, & Zschokke, B. S. 31855, 32018 Santos, Williams 1547, Elmer 14295*. In the mossy forest on the higher mountains, altitude 2,000 to 2,300 m.

Local name: Papatak (Ig.).

ILEX RACEMIFERA Loesen. in Nov. Act. Deutsch. Akad. Naturf. 89 (1908) 290; Elm. Leaf. Philip. Bot. 5 (1913) 1664.

Mindanao (Davao), *Warburg 14640*. In forests, altitude 300 to 700 m. Endemic.

ILEX SUBCAUDATA Merr. ex Elm. Leaf. Philip. Bot. 5 (1913) 1664, Philip. Journ. Sci. 10 (1915) Bot. 317 (descr.).

Luzon (Rizal), *Guerrero*. In forests. Endemic.

ILEX WARBURGII Loesen. in Nov. Act. Deutsch. Akad. Naturf. 78 (1901) 326, var. **BENGUETENSIS** (Elm.) Loesen. in herb.

Ilex benguetensis Elm. Leaf. Philip. Bot. 5 (1913) 1665.

Luzon (Benguet), *Williams 922, Elmer 8522, B. S. 5597 Ramos*. In forests, altitude about 1,200 m. The species in the Riu Kiu Islands.

ILEX WENZELII Merr. in Philip. Journ. Sci. 8 (1913) Bot. 382.

Ilex epiphytica Elm. Leaf. Philip. Bot. 5 (1913) 1667, non King.

Leyte, Mindanao (Agusan), *Wenzel 99, Elmer 3718*. Epiphytic or pseudoepiphytic, in primary forests up to an altitude of 1,100 m. Endemic.

Local names: Katagdo (Bag.); katagio (Bag.).

DOUBTFUL AND EXCLUDED SPECIES

ILEX LAURIFOLIA Zipp.; Loesen. in Nov. Act. Deutsch. Akad. Naturf. 78 (1901) 177.

A Moluccan species to which Loesener referred a Philippine specimen collected by Vidal as doubtfully representing it.

ILEX TRIFLORA Blume var. **LOBBIANA** (Rolfe) Loesen. in Nov. Act. Deutsch. Akad. Naturf. 78 (1901) 346.

Ilex lobbiana Rolfe in Journ. Bot. 21 (1884) 309.

Lobb's specimen, labeled as originating in Luzon, was certainly collected in Java, not in the Philippines; Lobb collected in both islands, and his specimens are notorious for their erroneous localizations.

CELASTRACEAE

1. EUONYMUS Linnaeus

EUONYMUS BENGUETENSIS Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 26.

Luzon (Bontoc, Benguet), *Elmer* 5977, *Vanoverbergh* 1234, *B. S.* 5779 *Ramos*, 37947 *Ramos & Edaña*. In thickets, altitude 1,200 to 1,700 meters. *Formosa*, *Faurie* 418, 420, 1373.

Local name: Takbang (Ig.).

EUONYMUS COCHINCHINENSIS Pierre Fl. Forest. Cochinch. 4 (1894) t. 309; Pitard in Lecomte Fl. Gén. Indo-Chine 1 (1912) 873, fig. 108; Merr. in Philip. Journ. Sci. 16 (1920) 449.

Euonymus timorensis Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 447; F.-Vill. Novis. App. (1880) 46; Vidal Phan. Cuming. Philip. (1885) 103, non Zipp.

Euonymus philippinensis Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 238.

Euonymus viburnifolius Merr. in Philip. Journ. Sci. 9 (1914) Bot. 312, non *Aegiphila viburnifolia* Juss.

Luzon (Cagayan, Ilocos Norte, Benguet, Batangas, Pangasinan, Nueva Vizcaya, Nueva Ecija, Rizal, Tayabas), Mindoro, Palawan, Masbate, Samar, Panay, Mindanao (Bukidnon). In forests at low altitudes. Siam, Malay Peninsula, Indo-China.

Local names: Alumañgug (P. Bis.); baras-báras (Ilk.); burubatuán (Tag.).

EUONYMUS ELMERI Merr. in Philip. Journ. Sci. 12 (1917) Bot. 281.

Euonymus alatus Elm. Leaflet. Philip. Bot. 4 (1912) 1484, non Regel.

Sibuyan, Luzon (Tayabas), *Elmer* 12256, 12485, *B. S.* 25436 *Yates*. In primary forests, altitude 300 to 700 m. Endemic, but scarcely distinguishable from *E. javanicus* Blume.

EUONYMUS JAVANICUS Blume Bijdr. (1826) 1146; Benn. Pl. Jav. Rar. (1838) 13, t. 28; Miq. Fl. Ind. Bat. 1² (1858-59) 588; F.-Vill. Novis. App. (1880) 46; Koord. & Val. Bijdr. Boom. Jav. 7 (1900) 68, Vidal Sinopsis Atlas (1883) 20, t. 31, f. C, Rev. Pl. Vasc. Filip. (1886) 87; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 278.

Luzon (Nueva Ecija, Bataan, Rizal, Laguna, Tayabas, Camarines, Sorsogon), Alabat, Mindoro, Samar, Leyte, Negros, Panay, Camiguin de Misamis, Mindanao, Basilan. Common in primary forests at low and medium altitudes. Burma, Andaman Islands, Malay Peninsula, Sumatra, Java, Borneo.

Local names: Kalimótas (Tag.); malasankí (Tag.); surag (Tag.); tubatubáhan (Tag.); tabáan (Mbo.); talangutiñgon (C. Bis.).

EUONYMUS OLIGANTHUS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 320.

Luzon (Benguet), *Merrill* 9644. In damp thickets, altitude about 1,300 m. Endemic.

2. LOPHOPETALUM Wight and Arnott

LOPHOPETALUM TOXICUM Loher in Ic. Bogor. 1 (1897) 55, t. 16.

Lophopetalum fimbriatum F.-Vill. Novis. App. (1880) 46; Vidal Sinopsis Atlas (1883) 20, t. 31, f. G, non Wight.

Hippocratea maingayi Vidal Sinopsis Atlas (1883) 20, t. 31, f. F, non Laws.

Luzon (Rizal, Tayabas, Laguna, Camarines), Mindoro, Masbate, Leyte, Mindanao (Lanao, Zamboanga, Davao), Sulu Archipelago. In primary forests at low and medium altitudes. Endemic.

Local names: Abúab (Tag.); abútab (Tag.); butíngi (Tag.); buyun (Sul.); dayandáng (Tag.); ditá (Neg.); kalibambáñgan (Mand.); puti-i-babáe (Lan.); puti-i-laláki (Lan.); sudkad (P. Bis.).

LOPHOPETALUM PAUCINERVIUM Merr. in Philip. Journ. Sci. 20 (1922) 402.

Mindanao (Bukidnon), *B. S. 39136 Ramos & Edaño*. In damp forests, altitude about 900 m. Endemic.

3. GLYPTOPETALUM Thwaites

GLYPTOPETALUM EUONYMOIDES Merr. in Philip. Journ. Sci. 12 (1917) Bot. 276.

Luzon (Ilocos Norte), *B. S. 27546 Ramos*. In thickets at low altitudes. Endemic.

GLYPTOPETALUM EUPHLEBIUM Merr. in Philip. Journ. Sci. 12 (1917) Bot. 280.

Glyptopetalum marivelense Merr. var. *euphlebiium* Merr. in Philip. Journ. Sci. 10 (1915) Bot. 321.

Luzon (Zambales, Pangasinan, Tayabas), *F. B. 8108 Curran & Merritt, B. S. 13246 Ramos, 29991 Fénix, 20718 Escritor*. In forests up to 1,400 m altitude. Endemic.

GLYPTOPETALUM GLANDULOSUM Merr. in Philip. Journ. Sci. 12 (1917) Bot. 279.

Palawan, *Merrill 9547*. In the mossy forest, altitude about 900 m. Endemic.

GLYPTOPETALUM LOHERI Merr. in Philip. Journ. Sci. 10 (1915) 321.

Luzon (Rizal, Cavite), *Loher 5765, 5796, F. B. 7672 Curran*. In forests, altitude about 400 m. Endemic.

GLYPTOPETALUM MARIVELENSE Merr. in Philip. Journ. Sci. 10 (1915) Bot. 321.

Euonymus marivelensis Elm. Leaf. Philip. Bot. 7 (1915) 2580.

Luzon (Benguet, Zambales, Bulacan, Bataan, Batangas, Tayabas), Cautanduanes, Cebu, *Elmer 6644, B. S. 30379, 19368 Ramos, 26784 Edaño, F. B. 10306 Curran, 2639 Meyer, 28015 Mabesa*. In primary forests at low and medium altitudes. Endemic.

GLYPTOPETALUM REMOTINERVIUM Merr. in Philip. Journ. Sci. 12 (1917) Bot. 280.

Palawan, *Merrill 741, Elmer 13095*. In primary forests, altitude about 300 m. Endemic.

GLYPTOPETALUM RETICULATUM Merr. in Philip. Journ. Sci. 12 (1917) Bot. 277.

Luzon (Abra), *B. S.* 27043 Ramos. In primary forests, altitude about 300 m. Endemic.

4. **MICROTROPIS** Wallich

MICROTROPIS CURRANII Merr. in Philip. Journ. Sci. 3 (1908) Bot. 238.

Luzon (Benguet, Zambales), *F. B.* 4970, 4966, 10834 Curran, 25135, 25133 Leaño, *B. S.* 5706, 5731, 5026, 4698 Ramos, Williams 1300. In the mossy forest and on exposed ridges on the higher mountains, altitude 1,800 to 2,400 m. Endemic.

MICROTROPIS PHILIPPINENSIS Merr. in Philip. Journ. Sci. 13 (1918) Bot. 306.

Luzon (Sorsogon), Catanduanes, *B. S.* 30580 Ramos, Elmer 15669, 14367, as *Microtropis rubra* Elm. In primary forests at low or medium altitudes. Endemic.

MICROTROPIS PLATYPHYLLA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 319.

Luzon (Rizal, Nueva Ecija, Tayabas), Loher 5774, 5779, *B. S.* 28569, 26402 Ramos & Edaño. In primary forests at medium altitudes. Endemic.

MICROTROPIS ROSTRATA Merr. in Philip. Journ. Sci. 17 (1920) 275.

Luzon (Camarines), *B. S.* 33568 Ramos & Edaño. In primary forests at low altitudes. Endemic.

5. **CELASTRUS** Linnaeus

CELASTRUS APOENSIS Elm. Leaf. Philip. Bot. 7 (1915) 2579.

Mindanao (Davao, Bukidnon), Elmer 11411, *B. S.* 38961 Ramos & Edaño. In the mossy forest, altitude about 1,900 m. Endemic; apparently allied to *C. championi* Benth.

Local name: Mangauat (Bag.).

CELASTRUS PANICULATA Willd. Sp. Pl. 1 (1798) 1125; F.-Vill. Novis. App. (1880) 46; Vidal Phan. Cuming. Philip. (1885) 103, Rev. Pl. Vasc. Filip. (1886) 88; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 85, Fl. Manila (1912) 301, Sp. Blancoanae (1918) 235.

Diosma serrata Blanco Fl. Filip. (1837) 168, ed. 2 (1845) 119, ed. 3, 1 (1877) 213.

Celastrus polybotrys Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 449; Vidal Phan. Cuming. Philip. (1885) 103; F.-Vill. Novis. App. (1880) 47.

Luzon (Cagayan, Isabela, Ilocos Norte, Nueva Vizcaya, Pangasinan, Bulacan, Bataan, Rizal, Cavite), Mindoro, Palawan, Mindanao (Cotabato). In thickets and second-growth forests at low altitudes. India through Malaya to New Caledonia.

Local names: Bilogo (Tag.); lagete (Tag.).

EXCLUDED SPECIES

CELASTRUS STYLOSA Willd.; F.-Vill. Novis. App. (1880) 47.

6. GYMNOSPORIA Wight and Arnott

GYMNOSPORIA DIVERSIFOLIA Maxim. in Bull. Acad. St. Pétersb. 27 (1881) 459.

Celastrus diversifolius Hemsl. in Journ. Linn. Soc. Bot. 23 (1886) 123.

Luzon (Ilocos Norte), *B. S. 27204 Ramos*, distributed as *Gymnosporia spinosa* var. *parva* Merr. In dry thickets at low altitudes. Riu Kiu Islands, Formosa, Fokien, Hainan.

GYMNOSPORIA NITIDA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 311.

Luzon (Pangasinan), *F. B. 11836 Domingo*. At low or medium altitudes. Endemic.

Local name: Matang-órang (Pang.).

GYMNOSPORIA SPINOSA (Blanco) Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 109; Merr. Fl. Manila (1912) 302, Sp. Blancoanae (1918) 235.

Cupania spinosa Blanco Fl. Filip. (1837) 184, ed. 2 (1845) 204, ed. 3, 2 (1878) 17.

Gymnosporia montana F.-Vill. Novis. App. (1880) 47; Vidal Rev. Pl. Vasc. Filip. (1886) 88, Merr. in Philip. Bureau Forestry Bull. 1 (1903) 34, non Laws.

Gymnosporia ambigua Vidal Sinopsis Atlas (1883) 20, t. 31, f. A.

Gymnosporia philippinensis Vidal Phan. Cuming. Philip. (1885) 103, *nomen nudum*.

Celastrus montana Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 105, non Spreng.

Putterlickia philippinensis Planch. ex Vidal Phan. Cuming. Philip. (1885) 103, in syn.

Luzon (Isabela, Cagayan, Ilocos Norte, Ilocos Sur, Abra, Nueva Vizcaya, Pangasinan, Nueva Ecija, Zambales, Bataan, Pampanga, Tayabas, Bulacan, Rizal, Camarines), Lubang, Ticao. In dry thickets at low altitudes, often abundant. Endemic.

Local names: Amúmut (Tag.); banak-bának (P. Bis.); dilakit (Tag.); malaráyap (Tag.); malaráyat (Tag.); nikanikut (Ilk.); suling-bagat (Tag.); tagapahan (Sbl.); tuntun-namí (Ilk.); tamaúian (Tag.).

Var. **PARVA** Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 110.

Luzon (Ilocos Norte, Rizal), *Merrill 5070, B. S. 27653 Ramos*. In thickets along streams at low altitudes. Endemic.

EXCLUDED SPECIES

GYMNOSPORIA NEGLECTA Wall.; F.-Vill. Novis. App. (1880) 47.

7. KURRIMIA Wallich

KURRIMIA PANICULATA Wall. Cat. (1831) No. 4336; Laws. in Hook. f. Fl. Brit. Ind. 1 (1875) 622.

Bhesa paniculata Arn. in Edinb. Philos. Journ. 16 (1834) 315.

Pyrospermum calophyllum Miq. Fl. Ind. Bat. Suppl. (1861) 402.

Trochisandra indica Bedd. Fl. Sylv. South.-Ind. (1869-73) t. 120.

Kurrimia luzonica Vidal Rev. Pl. Vasc. Filip. (1886) 88; Ceron Cat. Pl. Herb. Manila (1892) 48.

Schmidelia conferta Blanco Fl. Filip. ed. 2 (1845) 217, ed. 3, 2 (1878) 41.

Luzon (Cagayan, Rizal, Tayabas, Laguna, Camarines, Sorsogon), Mindoro, Leyte, Samar, Panay, Negros, Dinagat, Mindanao (Surigao, Agusan, Butuan, Zamboanga), Jolo. In primary forests at low and medium altitudes. Southern India, Malay Peninsula, Sumatra, Borneo.

Local names: Balikaskasan (P. Bis.); batúg (Ibn.); hindadabo (Mbo.); kuela (P. Bis.); layeng (Tag.); linuán (Ibn.); magapiña (P. Bis.); malapiña (P. Bis.); maratábian (Neg.); matigdas (P. Bis.); paguniñgan (Tag.); rapo-rapo (Bik.).

The reduction of *Schmidelia conferta* Blanco follows a suggestion made to me by Dr. L. Radlkofer in November, 1922. Blanco's description applies unmistakably to the common Philippine form described by Vidal as *Kurrimia luzonica*, but which I cannot distinguish from *K. paniculata* Wall. My reduction of Blanco's species to *Arytera litoralis* Blume is wrong.*

8. KOKOONIA Thwaites

KOKOONIA OCHRACEA (Elm.) comb. nov.

Ardisia ochracea Elm. Leaf. Philip. Bot. 5 (1913) 1819.

Palawan, *Elmer 12881*. In primary forests, altitude about 225 m. Endemic.

9. ELAEODENDRON Jacquin

ELAEODENDRON MINDANAENSE Merr. in Philip. Journ. Sci. 12 (1917) Bot. 277.

Mindanao (Davao), *F. B. 26243 Ceballos*. In forests, altitude about 650 m. Endemic.

ELAEODENDRON VIBURNIFOLIUM (Juss.) Merr. in Philip. Journ. Sci. 16 (1920) 449, t. 1.

Aegiphila viburnifolia Juss. in Ann. Mus. Paris 7 (1806) 76; Walp. Repert. 4 (1844-48) 124; Schauer in DC. Prodr. 11 (1847) 655.

Elaeodendron subrotundum King in Journ. As. Soc. Beng. 65² (1896) 356; Merr. in Journ. Str. Branch Roy. As. Soc. 76 (1917) 93.

"Philippines;" if so, probably from Jolo, *Sonnerat* in Herb. Mus. Paris. Borders of mangrove swamps, Malay Peninsula, Singapore, Borneo.

10. PLEUROSTYLIA Wight and Arnott

PLEUROSTYLIA WIGHTII Wight & Arn. Prodr. (1834) 157, var. **NEOCALEDONIA** Loesen. in Engl. Bot. Jahrb. 39 (1907) 171; Merr. in Philip. Journ. Sci. 12 (1917) Bot. 281.

Luzon (Batangas), *B. S. 22350 Ramos*. In thickets on dry slopes at low altitudes. India, Ceylon, Mauritius, Madagascar, New Caledonia.

11. PERROTTETIA Humboldt, Bonpland, and Kunth

PERROTTETIA ALPESTRIS (Blume) Loesen. in Engl. & Prantl Nat. Pflanzenfam. 3^o (1892) 220; Koord. & Val. in Ic. Bogor. 2 (1904) 187, t. 127.

Celastrus alpestris Blume Bijdr. (1826) 1145.

* Species Blancoanae (1918) 241.

Caryospermum philippinense Vidal Rev. Pl. Vasc. Filip. (1886) 89.

Perrottetia alpestris Loesen. var. *philippinensis* Stapf in Trans. Linn. Soc. Bot. 4 (1894) 141; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 359.

Perrottetia philippinensis Loesen. in Engl. Bot. Jahrb. 24 (1897) 200.

Luzon (Benguet, Bontoc, Laguna, Sorsogon), Mindoro, Panay, Camiguin de Misamis, Mindanao (Davao, Bukidnon), *Elmer* 18037, 16581, 11504, *Merrill* 4748, 5600, *Phil. Pl.* 1288, *B. S.* 31834 *Santos*, 30765, 37624, 38659 *Ramos & Edaño*, 5580, 23559 *Ramos*, 8491, 8865 *McGregor*. Chiefly in the mossy forest on the higher mountains, altitude 700 to 2,400 m. Sumatra, Java, Borneo.

Local names: Bubayug (Ig.); balakbákan (Buk.); dañgális (Bag.); tigaundako (C. Bis.).

12. SIPHONODON Griffith

SIPHONODON CELASTRINEUS Griff. in Calcutta Journ. Nat. Hist. 4 (1844) 247, *t.* 14; Hook. f. in Trans. Linn. Soc. 22 (1857) 133, *t.* 26; Laws. in Hook. f. Fl. Brit. Ind. 1 (1875) 629; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 239, Fl. Manila (1912) 302.

Xanthophyllum subglobosum Elm. var. *longifolium* Elm. Leaf. Philip. Bot. 5 (1913) 1677.

Luzon (Cagayan, Abra, Ilocos Sur, Tarlac, Bataan, Rizal, Laguna), Mindoro, Ticao, Leyte, Negros, Siargao, Mindanao (Agusan, Cotabato). In dry forests and thickets at low altitudes, ascending to 1,000 m. India to Indo-China, Java.

Var. **ACUMINATISSIMA** var. nov.

A typo differt foliis tenuiter acuminatis.

Basilan, Leyte, *B. S.* 16335 *Reillo*, *Elmer* 7144 as *Xanthophyllum glandulosum* Merr. In forests or thickets at low altitudes. Endemic.

Var. **SUBGLOBOSA** (Elm.) comb. nov.

Xanthophyllum subglobosum Elm. Leaf. Philip. Bot. 5 (1913) 1677.

Negros, *Elmer* 9470. In forested ravines, altitude about 450 m. Endemic.

Local names: Bunlas (C. Bis.); malagsak (Mbo.); marang (Tag.).

SIPHONODON PYRIFORMIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 240.

Luzon (Benguet), *F. B.* 5141 *Curran*, *B. S.* 2875 *Mearns*, *Sandkuhl* 160, *Elmer* 5985. In ravines, altitude 1,200 to 1,500 m. Endemic.

HIPPOCRATEACEAE

1. HIPPOCRATEA Linnaeus

HIPPOCRATEA ELLIPTICARPA Merr. in Philip. Journ. Sci. 17 (1920) 275.

Mindanao (Surigao), *B. S.* 34761 *Ramos & Pascasio*. In forests at low altitudes. Endemic.

HIPPOCRATEA INDICA Willd. Sp. Pl. 1 (1797) 193; Laws. in Hook. f. Fl. Brit. Ind. 1 (1875) 624; F.-Vill. Novis. App. (1880) 47; Vidal Rev. Pl. Vasc. Filip. (1886) 89; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 86, Sp. Blancoanae (1918) 236.

? *Hippocratea volubilis* Blanco Fl. Filip. (1837) 27, ed. 2 (1845) 20, ed. 3, 1 (1877) 37, non Linn.

Luzon (Zambales, Bataan, Rizal, Laguna, Batangas, Tayabas, Camarines), Lubang, Mindoro, Mindanao (Lanao). In thickets and second-growth forests at low altitudes. India and Ceylon to the Malay Peninsula, Indo-China, Sumatra, Java, and Borneo.

Local name: Lagitík (Tag.).

HIPPOCRATEA LAWSONII Elm. Leaf. Philip. Bot. 7 (1915) 2688.

Hiptage lawsonii Elm. Leaf. Philip. Bot. 8 (1915) 2751.

Sibuyan, *Elmer 12551, 12241*. In forests along streams, altitude about 225 m. Endemic.

HIPPOCRATEA MACRANTHA Korth. Verh. Nat. Gesch. Bot. (1839-42) 187, t. 13; Rolfe in Kew Bull. (1918) 47.

Hippocratea cumingii Laws. in Hook. f. Fl. Brit. Ind. 1 (1875) 624; F.-Vill. Novis. App. (1880) 47; Vidal Phan. Cuming. Philip. (1885) 103.

Samar, *Cuming 1725*. In forests or thickets at low altitudes. Malay Peninsula, Borneo.

HIPPOCRATEA MEGALOCARPA Merr. in Philip. Journ. Sci. 13 (1908) Bot. 20.

Luzon (Laguna), Mindoro, *F. B. 24921 Mabesa, B. S. 39556 Ramos*. In primary forests, altitude about 175 m. Endemic.

HIPPOCRATEA OBTUSIFOLIA Roxb. Hort. Beng. (1814) 5, *nomen nudum*, Fl. Ind. 1 (1820) 170; Laws. in Hook. f. Fl. Brit. Ind. 1 (1875) 623; F.-Vill. Novis. App. (1880) 47; Vidal Phan. Cuming. Philip. (1885) 103.

Mindoro, Masbate, *Cuming 1555, Merrill 3063*. In thickets and forests at low altitudes. India to China through Malaya to tropical Australia, after Lawson.

It is by no means certain that this identification is correct; see King in Journ. As. Soc. Beng. 65² (1896) 360 for a critical note on Roxburgh's species.

Local name: Basag (Bik.).

HIPPOCRATEA TRICHOPETALA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 21.

Luzon (Tayabas), Panay, Balabac, *B. S. 28958, 30950 Ramos & Edaña, Weber*. In forests along streams at low altitudes. Endemic.

EXCLUDED SPECIES

HIPPOCRATEA ARBOREA Roxb.; F.-Vill. Novis. App. (1880) 47.

2. SALACIA Linnaeus

SALACIA CYMOSA Elm. Leaf. Philip. Bot. 5 (1913) 1792.

Palawan, *Elmer 12997*. In thickets at low altitudes. Endemic.

SALACIA EUPHLEBIA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 22.

Mindanao (Surigao, Lanao), *Wenzel 1867, Piper 516, F. B. 23167 Agama*. In thickets and forests at low altitudes. Endemic.

SALACIA INTEGRIFOLIA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 85.

Luzon (Union, Pangasinan, Zambales, Bataan, Rizal, Tayabas, Albay), Mindoro, Panay, Mindanao (Surigao), *Whitford 1313, Williams 515, Cumíng 994, Merrill 2101, 949, B. S. 17695 Otones, 13393 Ramos, F. B. 2517 Meyer, 2550 Borden*. In thickets and forests at low altitudes. Endemic.

Local name: Matang-úlang (Tag.).

SALACIA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 7 (1912) Bot. 291.

Luzon (Cagayan, Ilocos Norte, Pangasinan, Rizal), Lubang, Mindoro, Palawan, Cebu, Mindanao (Surigao), *Merrill 977, Adduru 206, 269, 160, F. B. 19893, 19911 Danao, B. S. 17945, 18295 Otones, 34759, 34536 Ramos & Pascasio, 39451 Ramos*. In thickets and forests at low altitudes. Endemic.

Local names: Aropit (Tag.); bagi (Tagb.); balagin (Tagb.).

SALACIA PRINOIDES (Willd.) DC. Prodr. 1 (1824) 571; F.-Vill. Novis. App. (1880) 47; Vidal Sinopsis Atlas (1883) 20, *t. 31, f. E*, Phan. Cumíng. Philip. (1885) 103; Ceron Cat. Pl. Herb. Manila (1892) 48; Usteri Beitr. Ken. Philip. Veg. (1905) 114; Merr. Fl. Manila (1912) 303, Sp. Blancoanae (1918) 236.

Tontelea prinoides Willd. in Ges. Naturf. Fr. Neue Schr. 4 (1803) 184.

Salacia sinensis Blanco Fl. Filip. (1837) 26, ed. 2 (1845) 19, ed. 3, 1 (1877) 36, *t. 86*, non Gmel.

Comocladia errata Blanco Fl. Filip. (1837) 30.

Luzon (Zambales, Bataan, Batangas, Tayabas, Camarines), Mindoro, Palawan, Biliran, Romblon, Leyte, Panay, Bucas Grande, Mindanao, Sulu Archipelago, *Cumíng 1091, 1497, Merrill 424, 1189, 8627, 9444, Phil. Pl. 1259, 2044, Sp. Blancoanae 371, B. S. 35082 Ramos & Pascasio, Elmer 16562* as *S. angularis* Elm. In thickets and forests at low altitudes, often near the sea. India, through Malaya to tropical Australia.

Local names: Matang-úlang (Tag.); ope (Ig.).

SALACIA SUBSCANDENS Elm. Leaf. Philip. Bot. 5 (1913) 1793.

Palawan, *Elmer 12990*. In forests along streams at low altitudes. Endemic.

SALACIA WENZELII Merr. in Philip. Journ. Sci. 13 (1918) Bot. 23.

Leyte, *Wenzel 1534*. In forests at low altitudes. Endemic.

DOUBTFUL AND EXCLUDED SPECIES

SALACIA GRIFFITHII Laws.; F.-Vill. Novis. App. (1880) 47.

SALACIA OBLONGA Wall.; F.-Vill. l. c.

SALACIA ROXBURGHII Wall.; F.-Vill. l. c.; Vidal Sinopsis Atlas (1883) 20, *t. 31, f. D*.

Vidal's figure is of a single flower only; it is unrecognizable.

SALACIA TRIPLINERVIS Llanos in Mem. Acad. Cienc. Madr. III 2 (1857) 500; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 101; Merr. Sp. Blancoanae (1918) 236.

There is no description, but from the specific name Llanos's plant could not possibly have been a representative of the Hippocrateaceae.

SALACIA VERRUCOSA Wight; F.-Vill. Novis. App. (1880) 47; Ceron Cat. Pl. Herb. Manila (1892) 48.

Ceron's record was based on *Vidal* 2402, 2403, 2405, from Luzon, none of which I have seen.

STACKHOUSIACEAE

1. STACKHOUSIA Smith

STACKHOUSIA INTERMEDIA F. M. Bailey in Queensl. Agr. Journ. 3 (1898) 281, forma *PHILIPPINENSIS* Pamp. in Bull. Herb. Boiss. II 5 (1905) 1150; Merr. in Philip. Journ. Sci. 11 (1916) Bot. 286.

Stackhousia muricata Benth. in DC. Prodr. 15¹ (1864) 501, quoad Philip.; F.-Vill. Novis. App. (1880) 47; Vidal Phan. Cuming. Philip. (1885) 103, Rev. Pl. Vasc. Filip. (1886) 90, non Lindl.

Luzon (Cagayan, Ilocos Norte, Bontoc, Pangasinan), Culion, Guimaras, *B. S.* 18009 Robinson, 27525, 41330 Ramos, *F. B.* 16584 Curran, *Vanoverbergh* 4055. In open grasslands at low altitudes, ascending to 1,500 m; very rare or local. Caroline Islands, Amboina, Sumatra, the species in northeastern Australia. The only representative of the family north of Australia.

STAPHYLEACEAE

1. TURPINIA Ventenat

TURPINIA POMIFERA (Roxb.) DC. Prodr. 2 (1825) 3; Hiern in Hook. f. Fl. Brit. Ind. 1 (1875) 698; Vidal Sinopsis Atlas (1883) 22, *t.* 35, *f.* G; Koord. & Val. Bijdr. Boom. Jav. 9 (1903) 245; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 86, 3 (1908) Bot. 418, 5 (1910) Bot. 359.

Dalrymplea pomifera Roxb. Hort. Beng. (1814) 17, *nomen nudum*, Pl. Coromandel 3 (1819) 76, *t.* 279.

Turpinia ovalifolia Elm. Leaflet. Philip. Bot. 2 (1908) 490.

Throughout the Philippines in primary forests at low and medium altitudes, on some mountains ascending to 2,200 m. India to China, Formosa, and Malaya.

Local names: Anon̄go (S. L. Bis.); balaybaláyan (Tag.); damas (Ig.); danipo (Ig.); danuman (Ig.); laloi (Bag.); malakatiki (Iv.); malayba (Tag.); nagaspó (Bik.); nḡirú (Neg.); pamarabáken (Ibn.); tarosog (Bag.); tigatbó (Bik.); tuol (Ig.); udo (Tag.).

ICACINACEAE

1. VILLARESIA Ruiz and Pavon

VILLARESIA LATIFOLIA Merr. in Philip. Journ. Sci. 14 (1919) 415.

Samar, *B. S.* 24557 Ramos. In primary forests at low altitudes. Endemic.

Local name: Malaampípi (S. L. Bis.).

VILLARESIA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 14 (1919) 414.

Luzon (Ilocos Norte), *B. S.* 33267, 33308 Ramos. In primary forests, altitude about 1,000 m. Endemic.

2. PLATEA Blume

PLATEA APOENSIS Elm. Leaf. Philip. Bot. 8 (1915) 2789.

Mindanao (Davao), *Elmer 10582, 11412, 10875*. In primary forests, altitude 1,200 to 1,800 m. Endemic.

Local names: Kalisan (Bag.); kaliso (Bag.).

PLATEA FULIGINEA Elm. Leaf. Philip. Bot. 8 (1915) 2790.

Mindanao (Davao, Agusan), *Elmer 10613, 13748*. In primary forests, altitude about 1,500 m. Endemic.

Local name: Yongkatadan (Mbo.).

PLATEA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 9 (1914) Bot. 313.

Platea latifolia Merr. op. cit. 1 (1906) Suppl. 58, non Blume.

Luzon (Benguet, Bataan, Sorsogon), Leyte, Panay, Negros, Camiguin de Misamis, Mindanao (Lanao), *Whitford 1202, F. B. 2098 Borden, B. S. 23596, 15242 Ramos, 37693, 40381 Ramos & Edaña, Elmer 6835, 9777, 15264, 16355, Wenzel 1047*. In primary forests, altitude 750 to 1,300 m. Endemic.

Local name: Pagpágo (Bon.).

3. STEMONURUS Blume

STEMONURUS HALLIERI (Merr.) comb. nov.

Urandra hallieri Merr. in Philip. Journ. Sci. 5 (1910) Bot. 194.

Mindanao (Zamboanga, Surigao), Basilan, Hallier, *F. B. 9176 Whitford & Hutchinson, 21872 Villamil*. In primary forests at low altitudes. Endemic.

Local name: Malatadu (Mbo.).

STEMONURUS MERRITTII Merr. in Philip. Journ. Sci. 3 (1908) Bot. 240.

Mindoro, Palawan, *B. S. 40837 Ramos, F. B. 9916 Merritt, 21585 Danao, Elmer 12622, 12842*. In primary forests at low altitudes. Endemic.

STEMONURUS SECUNDIFLORUS Blume Bijdr. (1825) 649, Mus. Bot.

Ludg.-Bat. 1 (1849-51) fig. 45; Becc. Malesia 1 (1877) 112, t. 4;

Koord. & Val. in Meded. Lands Plantent. 33 (1900) 145.

Lasianthera secundiflora Miq. Fl. Ind. Bat. 1 (1856) 792.

Urandra secundiflora O. Ktze. Rev. Gen. Pl. (1891) 112.

Urandra gitingensis Elm. Leaf. Philip. Bot. 4 (1912) 1476.

Sibuyan, Panay, *Elmer 12076, 12277, F. B. 27043 Sajor, 23930 Cortes & Knapp, 22606 Cortes*. In primary forests up to an altitude of 600 m. Malay Peninsula, Sumatra, Java, Borneo.

This is clearly the type of Blume's genus; see Koorders & Valetton l. c.

Local name: Tugbák (P. Bis.).

4. GOMPHANDRA Wallich

GOMPHANDRA AGUSANENSIS (Elm.) comb. nov.

Stemonurus agusanensis Elm. Leaf. Philip. Bot. 7 (1915) 2689.

Mindanao (Agusan, Surigao), *Elmer 14018, F. B. 27004 Mallonga*. In primary forests along streams, altitude about 225 m. Endemic.

Local name: Lambuan (Mbo.).

GOMPHANDRA APOENSIS (Elm.) comb. nov.

Stemonurus apoensis Elm. Leaf. Philip. Bot. 7 (1915) 2690.

Luzon (Sorsogon), Mindanao (Davao), *Elmer* 10658, 15416. In primary forests along streams, altitude about 900 m. Endemic.

Local name: Marumai (Bag.).

GOMPHANDRA CUMINGIANA (Miers) F.-Vill. Novis. App. (1880) 46;

Vidal Phan. Cuming. Philip. (1885) 102, Rev. Pl. Vasc. Filip. (1886)

86; Valetton Crit. Overzicht Olac. (1886) 229.

Stemonurus cumingianus Miers Contrib. Bot. 1 (1851-62) 92.

Luzon (Tayabas, Laguna, Camarines, Sorsogon), Alabat, Mindoro, Palawan, Samar, Biliran, Leyte, incl. *Elmer* 16429, 15295 as *Urandra sorsogonensis* Elm. In primary forests at low and medium altitudes. Endemic.

Local names: Baróbo (Mang.); bayanotan (S. L. Bis.); lipid (Sul.); mañgoi (Bik.).

GOMPHANDRA FLAVICARPA (Elm.) comb. nov.

Stemonurus flavicarpus Elm. Leaf. Philip. Bot. 7 (1915) 2691.

Mindanao (Davao, Bukidnon, Lanao), *Elmer* 11330, 10527, Warburg 14638, Williams 2582, Clemens 713, 971, F. B. 25247 Alvarez, B. S. 38821, 38864, 39074 Ramos & Edaño. In primary forests, altitude 700 to 1,400 m; very closely allied to *S. cumingianus* Miers. Endemic.

Local names: Maramai (Bag.); mata-matá (Bag.).

GOMPHANDRA FULIGINEA (Elm.) comb. nov.

Urandra fuliginea Elm. Leaf. Philip. Bot. 2 (1908) 491.

Luzon (Benguet), *Elmer* 8620, Williams 1270. In thickets, altitude 1,400 to 1,700 m. Endemic.

Local name: Danka (Ig.).

GOMPHANDRA GLABRA Merr. in Philip. Journ. Sci. 17 (1920) 277.

Samar, Leyte, Merrill Phil. Pl. 1628, B. S. 24241, 17660, 24547 Ramos, Wenzel 1722, 1744, 1029. In primary forests at low altitudes. Endemic.

GOMPHANDRA LANCIFOLIA Merr. in Philip. Journ. Sci. 17 (1920) 277.

Luzon (Tayabas, east coast), B. S. 26544 Ramos & Edaño. In primary forests, altitude about 200 m. Endemic.

Local name: Paranyuyog (Neg.).

GOMPHANDRA LAXIFLORA (Miers) Rolfe in Journ. Bot. 23 (1885)

211, Phan. Cuming. Philip. (1885) 103, Rev. Pl. Vasc. Filip. (1886) 86.

Stemonurus laxiflorus Miers Contrib. Bot. 1 (1851-61) 98, t. 16;

Merr. in Philip. Journ. Sci. 3 (1908) Bot. 240.

Platea laxiflora Miers. l. c.

Cissus flexuosa Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 415;

Planch. in DC. Monog. Phan. 5 (1887) 264.

Luzon (Albay), Mindoro, *Cuming* 891, F. B. 4060 Merritt, 19926 Amarillas, B. S. 41089 Ramos. In primary forests at low altitudes. Endemic.

GOMPHANDRA LUZONIENSIS (Merr.) comb. nov.

Urandra luzoniensis Merr. in Philip. Journ. Sci. 3 (1908) Bot. 242, Sp. Blancoanae (1918) 237.

Elaeocarpus ? integrifolius Blanco Fl. Filip. ed. 2 (1845) 306, ed. 3, 2 (1878) 202, non Lam.

Luzon (Cagayan, Ilocos Norte, Ilocos Sur, Union, Nueva Ecija, Bataan, Rizal, Laguna, Cavite, Batangas), Mindoro, Marinduque, Palawan. Common in primary forests at low altitudes. Endemic.

Local names: Bibislákin (Ilk.); bitlag (Tag.); ímus (Ilk.); mabúnót (Tag.); manankálau (Tag.); maratúba (Ibn.); rogrogso (Ilk.).

GOMPHANDRA OBLONGIFOLIA Merr. in Philip. Journ. Sci. 17 (1920) 276.

Luzon (Camarines, Sorsogon), Catanduanes, *B. S.* 33727 Ramos & Edaño, 30258, 30355 Ramos, *F. B.* 27406 Alambra, 21103 Hsia, Elmer 15650 as *Urandra leytenensis* Elm. In primary forests at low altitudes. Endemic.

Local name: Laing (Bik.).

GOMPHANDRA PAUCIFLORA (Merr.) comb. nov.

Urandra pauciflora Merr. in Philip. Journ. Sci. 3 (1908) Bot. 243.

Mindoro, Sibuyan, *F. B.* 6770, 4327 Merritt, *B. S.* 39596, 39658, 41006, 41107 Ramos, 12508, 12202 Elmer. In primary forests at low altitudes. Endemic.

EXCLUDED SPECIES

GOMPHANDRA AXILLARIS Wall.; F.-Vill. Novis. App. (1880) 45.

GOMPHANDRA AFFINIS Mast.; F.-Vill. l. c.

5. GONOCARYUM Miquel

GONOCARYUM CALLERYANUM (Baill.) Becc. Malesia 1 (1877) 123; Valetón Crit. Overzicht Olac. (1886) 247; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 243, 418.

Phlebocalymna calleryana Baill. Adansonia 9 (1869) 147.

Gonocaryum tarlacense Vidal Sinopsis Atlas (1883) 20, t. 30, f. C, Rev. Pl. Vasc. Filip. (1886) 68; Ceron Cat. Pl. Herb. Manila (1892) 46; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 86.

Batan Islands and all provinces in Luzon. Common in primary forests at low and medium altitudes, ascending to 750 m. Endemic.

Local names: Ampalang (Klg.); angkak (Bik.); basa-basa (Ibn.); busigan (Ibn.); gohan (Klg.); karasóko (Ibn.); lunás (Tag.); malagohan (Klg.); malapínggan (Tag.); malasámat (Tag.); malasitúm (Pamp.); malatápai (Bik.); maragauák (Ibn.); naragaúed (Ibn.); rogrogso (Ilk.); urátan (Ilk.); yaya (Neg.).

GONOCARYUM COGNATUM Elm. Leaf. Philip. Bot. 1 (1908) 315.

Luzon (Sorsogon), Leyte, Mindanao (Butuan), *Elmer* 7352, 17061, *F. B.* 20744 Rafael & Ponce. In forests at low altitudes. Endemic.

GONOCARYUM GRANDIFOLIUM Merr. in Philip. Journ. Sci. 17 (1920) 278.

Panay, Dinagat, *B. S.* 31456 Ramos & Edaño, 35205 Ramos & Pascasio. In primary forests at low altitudes. Endemic.

6. *IODES* Blume

IODES PHILIPPINENSIS Merr. in Philip. Journ. Sci. 3 (1908) Bot. 241; C. B. Rob. op. cit. 6 (1911) Bot. 209.

Iodes ovalis Baill. in DC. Prodr. 17 (1873) 22, quoad Philip.; F.-Vill. Novis. App. (1880) 46; Vidal Phan. Cuming. Philip. (1885) 103, Rev. Pl. Vasc. Filip. (1886) 85, non Blume.

Luzon (Sorsogon), Polillo, Mindoro, Palawan, Masbate, Biliran, Romblon, Sibuyan, Leyte, Panay, Negros, Cebu, Mindanao (Surigao), Basilan. In thickets at low altitudes. Borneo.

7. *SARCOSTIGMA* Wight and Arnott

SARCOSTIGMA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 10 (1915) Bot. 276.

Leyte, Mindanao (Agusan), Wenzel 987, Elmer 13732, 13930 as *S. surigaoensis* Elm. In primary forests, altitude about 150 cm.

8. *PYRENACANTHA* Wight

PYRENACANTHA REPANDA (Merr.) comb. nov.

Freeria repanda Merr. in Philip. Journ. Sci. 7 (1912) Bot. 292.

Luzon (Tayabas, Sorsogon), Samar, Siargao, B. S. 24369, 13289 Ramos, 34929 Ramos & Pascasio, Elmer 17359 as *Freeria strongei* Elm. In forests at low altitudes. Endemic.

This is probably the same as Vidal 2387 from Bulacan Province, Luzon, reported by Ceron, Cat. Pl. Herb. Manila (1892) 46, as *Pyrenacantha* sp.

9. *PHYTOCRENE* Wallich

PHYTOCRENE BLANCOI (Azaola) Merr. in Philip. Journ. Sci. 2 (1907) Bot. 432, Sp. Blancoanao (1918) 237.

Kadsura blancoi Azaola in Blanco Fl. Filip. ed. 2 (1845) 594, ed. 3, 3 (1879) 118.

Gynoecephalum luzoniense Llanos in Rev. Progr. Cienc. 15 (1865) 55.

Phytocrene luzoniensis Baill. in Adansonia 10 (1871-73) 281, DC. Prodr. 17 (1873) 10; F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 86; F.-Vill. Novis. App. (1880) 46; Ceron Cat. Pl. Herb. Manila (1892) 46.

Luzon (Rizal, Laguna, Tayabas, Sorsogon), Polillo, Palawan, Samar, Leyte, Mindanao (Butuan, Lanao, Davao). In thickets and forests at low altitudes; widely scattered. Endemic.

Local name: Olo-olo (Bag.).

PHYTOCRENE LOHERI Merr. in Philip. Journ. Sci. 7 (1912) Bot. 293.

Luzon (Rizal), Loher 5796. In forests. Endemic.

PHYTOCRENE OBOVOIDEA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 322.

Biliran, B. S. 18832 McGregor. In forests at low altitudes. Endemic.

10. *MIQUELIA* Meissner

MIQUELIA CUMINGII Baill. Adansonia 10 (1871-73) 278, DC. Prodr. 17 (1873) 14; Vidal Phan. Cuming. Philip. (1885) 103, Rev. Pl. Vasc. Filip. (1886) 86.

Luzon (Cagayan, Benguet, Tayabas), Mindoro, Samar, Leyte, Siargao, *Cuming 1378, Elmer 6440, B. S. 24572, 19526, 40843 Ramos, 24869 Ramos & Pascasio, McGregor 229, Wenzel 1767*. In primary forests at low altitudes. Endemic.

MIQUELIA PHILIPPINENSIS Merr. in Philip. Journ. Sci. 14 (1919) 416.

Luzon (Ilocos Norte), *B. S. 32885 Ramos*. In forests at low altitudes. Endemic.

MIQUELIA RETICULATA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 312.

Camiguin de Misamis, *B. S. 14674 Ramos*. In primary forests at low altitudes. Endemic.

11. CARDIOPTERIS Wallich

CARDIOPTERIS MOLUCCANA Blume Rumphia 3 (1847) 207; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 423.

Cardiopteris lobata R. Br. in Wall. Cat. (1847) No. 8033, *nomen nudum*, Benn. Pl. Jav. Rar. (1852) 246, t. 49; F.-Vill. Novis. App. (1880) 46.

Luzon (Camarines, Sorsogon), Negros, Mindanao (Lanao, Bukidnon, Davao), *B. S. 22208, 23449 Ramos, 38579 Ramos & Edaña, Clemens 137, Elmer 17219, 10855, 11753*. In primary forests at low and medium altitudes. India to Yunnan southward through Malaya to New Guinea and northeastern Australia.

Local names: Bañgogan (Bik.); gurisan (Bag.); lila (Buk.); sagumáti (Bag.); tagulaúai (P. Bis.).

ACERACEAE

1. ACER Linnaeus

ACER NIVEUM Blume Rumphia 3 (1837) 193, t. 167B; Hiern in Hook. f. Fl. Brit. Ind. 1 (1875) 693; Pax in Engl. Pflanzenreich 8 (1902) 31; Koord. & Val. in Meded. Lands Plantent. 9 (1903) 254.

Acer philippinum Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 36, Philip. Journ. Sci. 1 (1906) Suppl. 86, 2 (1907) Bot. 279.

Acer curranii Merr. in Philip. Journ. Sci. 4 (1909) Bot. 285.

Luzon (Cagayan, Abra, Bontoc, Lepanto, Benguet, Laguna, Bataan, Sorsogon), Negros, Mindanao (Davao), *Vanoverbergh 1052, 3807, Elmer 15988, 11437, Merrill 3872, 4528, Phil. Pl. 1721, B. S. 5708, 23408 Ramos, 31933 Santos, F. B. 21296 Sandkuhl, 25445 Santos, 6254, 17404 Curran*. In mountain forests, altitude 1,000 to 2,400 m; widely scattered. Assam, Burma, Sumatra, Java, Celebes.

Local names: Baliag (Ig.); laing (Tag.); tio (Bag.).

SAPINDACEAE

1. CARDIOSPERMUM Linnaeus

CARDIOSPERMUM HALICACABUM Linn. Sp. Pl. (1753) 336; DC. Prodr. 1 (1824) 601; Blanco Fl. Filip. (1837) 312, ed. 2 (1845) 218, ed. 3, 2 (1878) 44; Miq. Fl. Ind. Bat. 1² (1858-59) 578; F.-Vill. Novis. App. (1880) 50; Radlk. in Perk. Frag. Fl. Philip. (1904) 56, Philip. Journ. Sci. 8 (1913) Bot. 443; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 418, Fl. Manila (1912) 304, Sp. Blancoanae (1918) 237.

In thickets, waste places, etc., in the settled areas throughout the Philippines; certainly an introduced plant in the Archipelago. Pantropic; the Philippine material is all referable to the variety *microcarpum* (HBK.) Blume.

Local names: Alalayou (C. Bis.); bangkólon (Tag.); kana (Bis.); lobo-lobohan (Tag.); layau (Tag.); paltupaltúkan (Pamp.); paria-áso (Ilk.); parolparólan (Tag.); paspalyá (Ilk.).

2. ALLOPHYLUS Linnaeus

ALLOPHYLUS APIOCARPUS Radlk. in Sitz. Kgl. Bayer. Akad. **38** (1908) 227, Philip. Journ. Sci. **8** (1913) Bot. 443, 448.

Cebu, Basilan, Mindanao (Bik.); *F. B. 6120 Espinosa, 18948 Miranda, B. S. 38457 Ramos & Edaño*. In thickets or forests at low altitudes. Endemic.

Local names: Mabúgnai (C. Bis.); luṅga-luṅga (Buk.).

ALLOPHYLUS BREVIPETIOLATUS Radlk. in Philip. Journ. Sci. **8** (1913) Bot. 443, 449.

Panay (*Vidal 3693*), *B. S. 35338 Martelino & Edaño*. On slopes in open forests at low altitudes. Endemic.

ALLOPHYLUS CHLOROCARPUS Radlk. in Sitz. Kgl. Bayer. Akad. **38** (1908) 232, Philip. Journ. Sci. **8** (1913) Bot. 444, 451.

Samar, Palawan, Mindanao (Lanao, Zamboanga), *F. B. 3473 Curran, B. S. 37009 Ramos & Edaño, Clemens 769, 1170a*. In old clearings, thickets, etc., ascending to 700 m altitude. Endemic.

Local name: Sagima (Sub.).

ALLOPHYLUS DASYTHYRSUS Radlk. in Sitz. Kgl. Bayer. Akad. **38** (1908) 231, Philip. Journ. Sci. **8** (1913) Bot. 444.

Luzon (Cagayan), *Cuming 1332*. Scarcely distinguishable from *A. filiger* Radlk. Endemic.

ALLOPHYLUS DIMORPHUS Radlk. in Act. Congr. Bot. Amsterdam 1877 (1878) 126 (Sapind. Holl.-Ind. 56), Perk. Frag. Fl. Philip. (1904) 56, Sitz. Kgl. Bayer. Akad. **38** (1908) 234, Philip. Journ. Sci. **8** (1913) Bot. 444; Vidal Rev. Pl. Vasc. Filip. (1886) 95; Merr. in Philip. Journ. Sci. **1** (1906) Bot. 86, Fl. Manila (1912) 304.

Allophylus blancoi Naves in Blanco Fl. Filip. ed. 3 (1877-83) t. 260, non Blume.

Allophylus cobbe Blume, forma *blancoi* F.-Vill. Novis. App. (1880) 51; Vidal Rev. Pl. Vasc. Filip. (1886) 94, Phan. Cuming. Philip. (1885) 104.

Allophylus quinatus Radlk. in Perk. Frag. Fl. Philip. (1904) 57, Sitz. Kgl. Bayer. Akad. **38** (1908) 234, Philip. Journ. Sci. **8** (1913) Bot. 444.

Luzon (Cagayan, Ilocos Norte, Union, Zambales, Pampanga, Bulacan, Bataan, Rizal, Laguna, Batangas), Mindoro, Cuyo. Common in dry thickets and second-growth forests at low altitudes. Indo-China.

Local names: Anarong (Sbl.); lagúndi-gúbat (Sbl.); laret (Tag.); malalagúndi (Tag.).

ALLOPHYLUS FILIGER Radlk. in Act. Congr. Bot. Amsterdam 1877 (1878) 126 (Sapind. Holl.-Ind. 56), Sitz. Kgl. Bayer. Akad. 38 (1908) 231, Philip. Journ. Sci. 8 (1913) Bot. 444; Merr. op. cit. 1 (1906) Suppl. 86; Vidal Rev. Pl. Vasc. Filip. (1886) 95.

Allophylus fulvinervis Vidal Phan. Cuming. Philip. (1885) 105, Rev. Pl. Vasc. Filip. (1886) 94, non Blume.

Luzon (Nueva Ecija, Bulacan, Bataan, Rizal, Laguna). In secondary and primary forests at low altitudes, ascending to 500 m. Endemic.

Local names: Bating (Tag.); bato-bató (Tag.).

ALLOPHYLUS GRANULATUS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 444, 451.

Luzon (Isabela, Ilocos Norte, Benguet), *B. S. 12560 Félix, 32861 Ramos, F. B. 26072 Barros*. On forested slopes at low and medium altitudes. Endemic.

Local name: Maradaláyap (Ilk.).

ALLOPHYLUS GROSSEDENTATUS (Turcz.) F.-Vill. Novis. App. (1880) 51; Radlk. in Perk. Frág. Fl. Philip. (1904) 56, Philip. Journ. Sci. 8 (1913) Bot. 444, Sitz. Kgl. Bayer. Akad. 38 (1908) 232.

Schmidelia grossedentata Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 401.

Allophylus cobbe Blume var. *grossedentata* Vidal Phan. Cuming. Philip. (1885) 105, Rev. Pl. Vasc. Filip. (1886) 94.

Luzon (Laguna), Leyte, *Cuming 640, Elmer 7333, 18393, F. B. 22278 Mariano*. In forests at low altitudes, ascending to 500 m. Indo-China?

ALLOPHYLUS HYMENOCALYX Radlk. in Sitz. Kgl. Bayer. Akad. 38 (1908) 229, Philip. Journ. Sci. 8 (1913) Bot. 443, 450.

Mindanao (Agusan, Zamboanga, Davao), *Copeland 1635, Merrill 8195, Williams 2407, Elmer 11774, 13499*. In forests up to an altitude of 1,000 m. Endemic.

Local name: Damolio (Bag.).

ALLOPHYLUS INSIGNIS Radlk. in Sitz. Kgl. Bayer. Akad. 38 (1908) 234, Philip. Journ. Sci. 8 (1913) Bot. 444.

Luzon (Nueva Ecija), (*Cuming 1447*); also in Palawan fide Radlkofer. Not seen; probably very close to *A. dimorphus* Radlk. Endemic.

ALLOPHYLUS LARGIFOLIUS Radlk. in Sitz. Kgl. Bayer. Akad. 38 (1908) 226, Philip. Journ. Sci. 8 (1913) Bot. 443, 448.

Mindanao (Zamboanga), *Merrill 5475, Williams 2302, B. S. 16508 Reillo*. In forested ravines at low altitudes. Endemic.

ALLOPHYLUS LEPTOCLADUS Radlk. in Leaf. Philip. Bot. 5 (1913) 1602, Philip. Journ. Sci. 8 (1913) Bot. 444.

Mindanao (Davao, Lanao), *Elmer 11957, F. B. 26671 Rola*. In forests, altitude 1,200 to 1,600 m. Endemic.

Local name: Tarañgisi (Bag.).

ALLOPHYLUS LEUCOCHROUS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 444.

Allophylus leucocladus Radlk. in Philip. Journ. Sci. 6 (1911) Bot. 181, 209 sphalm.

Polillo, Luzon (Sorsogon), *B. S.* 6880 Robinson, 23493 Ramos. In thickets or forests at low or medium altitudes. Endemic.

ALLOPHYLUS MACROSTACHYS Radlk. in Perk. Frag. Fl. Philip. (1904) 56, Sitz. Kgl. Bayer. Akad. 38 (1908) 232, Philip. Journ. Sci. 8 (1913) Bot. 444.

Allophylus cobbe F.-Vill. Novis. App. (1880) 51; Vidal Sinopsis Atlas (1883) 21, t. 34, f. C, Phan. Cuming. Philip. (1885) 104, Rev. Pl. Vasc. Filip. (1886) 94, p. p. non Blume.

Luzon (Benguet, Pangasinan, Pampanga, Nueva Ecija, Bataan, Rizal, Laguna, Tayabas, Batangas), Mindoro. In secondary and open primary forests at low altitudes. Endemic.

Local names: Barotañgol (Neg.); bignái-báker (Ilk.); lĩngo-lĩngo (Pang.).

ALLOPHYLUS MALVACEUS Radlk. in Sitz. Kgl. Bayer. Akad. 38 (1908) 231, Philip. Journ. Sci. 8 (1913) Bot. 444.

Luzon (Pangasinan), (*Cuming* 1021). Not seen. Endemic.

ALLOPHYLUS PEDUNCULARIS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 443, 450.

Masbate, Ticao, Luzon (Sorsogon), *F. B.* 12661 Rosenbluth, *Elmer* 15677, 15125, 15314. In thickets and forests at low altitudes. Endemic.

ALLOPHYLUS RACEMOSUS (Linn.) Radlk. in Engl. & Prantl Nat. Pflanzenfam. 3⁵ (1895) 313, Perk. Frag. Fl. Philip. (1904) 58, Sitz. Kgl. Bayer. Akad. 38 (1908) 230, Philip. Journ. Sci. 8 (1913) Bot. 444.

Schmidelia racemosa Linn. Mant. 1 (1767) 67; A. Gray Bot. Wilkes U. S. Explor. Exped. (1754) 249.

Luzon (Bulacan), Negros, Mindanao, Basilan, Palawan, Sulu Archipelago, *F. B.* 7195 Curran, Merrill 5255, Warburg 13342. In thickets or forests at low altitudes. Burma and Indo-China through Malaya to New Guinea.

ALLOPHYLUS SAMARENSIS Merr. in Philip. Journ. Sci. 11 (1916) Bot. 192.

Samar, *B. S.* 24402 Ramos. On forested slopes, altitude about 200 m. Endemic.

Local name: Hampapañgiai (S. L. Bis.).

ALLOPHYLUS SETULOSUS Radlk. in Perk. Frag. Fl. Philip. (1904) 58, Sitz. Kgl. Bayer. Akad. 38 (1908) 231, Philip. Journ. Sci. 8 (1913) Bot. 444.

Mindanao (Zamboanga), Jolo, *B. S.* 16492 Reillo, 11775, 11759 Robinson, 37466 Ramos & Edaña, Merrill 8149, Hallier, Warburg 14919. In thickets at low altitudes. Endemic.

ALLOPHYLUS SIMPLICIFOLIUS Radlk. in Elm. Leaf. Philip. Bot. 5 (1913) 1601, Philip. Journ. Sci. 8 (1913) Bot. 443.

Samar, Mindanao (Zamboanga, Agusan, Dayao), Siargao, *Elmer* 11138, 13590, Merrill Phil. Pl. 1690, *F. B.* 26161 Miranda, 28215 Elumir, *B. S.* 35022 Ramos & Pascasio. In forests up to 500 m altitude. Endemic.

Local name: Nanhiñgon (Bag.).

ALLOPHYLUS STENOPHYLLUS Merr. in Philip. Journ. Sci. 14 (1919) 417.

Luzon (Ilocos Norte), *B. S.* 32839, 27334 Ramos. In dry thickets at low altitudes. Endemic.

ALLOPHYLUS SUBINCISO-DENTATUS Radlk. in Elm. Leaf. Philip. Bot. 5 (1913) 1603, Philip. Journ. Sci. 8 (1913) Bot. 444.

Allophylus repando-dentatus Radlk. l. cc.

Mindanao (Surigao, Davao), *Elmer* 11728, 11827, *B. S.* 34430 Ramos & Pascasio. In thickets at low and medium altitudes, ascending to 1,000 m. Endemic.

Local names: Atig (Bag.); basloi (Bag.); duknai (C. Bis.).

ALLOPHYLUS TERNATUS (Forst.) Radlk. in Engl. & Prantl Nat. Pflanzenfam. 3⁵ (1895) 313, Perk. Frag. Fl. Philip. (1904) 59, Sitz. Kgl. Bayer. 38 (1908) 230, Philip. Journ. Sci. 8 (1913) Bot. 444; C. B. Rob. op. cit. 6 (1911) Bot. 209; Merr. Sp. Blancoanae (1918) 237.

Aporetica ternata Forst. Char. Gen. (1776) 132.

Aporetica penicellata Blanco Fl. Filip. (1837) 291, ed. 2 (1845) 203, ed. 3, 2 (1878) 15.

Allophylus leptococcus Radlk. in Sitz. Kgl. Bayer. Akad. 38 (1908) 231, Philip. Journ. Sci. 8 (1913) Bot. 444, Engl. Bot. Jahrb. 56 (1920) 264, quoad Philip.!

Luzon (Zambales, Bataan, Tayabas, Camarines, Albay), Mindoro, Polillo, Leyte, Mindanao, Basilan. In thickets along the seashore and along tidal streams. Borneo to the Caroline Islands, Timor, tropical Australia, New Caledonia, New Hebrides, and the Marshall Islands.

Local name: Mambahino (Sul.).

ALLOPHYLUS TIMORENSIS (DC.) Blume Rumphia 3 (1847) 130; Radlk. in Sitz. Kgl. Bayer. Akad. 38 (1908) 232; Perk. Frag. Fl. Philip. (1904) 59, Philip. Journ. Sci. 8 (1913) Bot. 444; Merr. Sp. Blancoanae (1918) 238.

Schmidelia timorensis DC. Prodr. 1 (1824) 611.

Allophylus blancoi Blume Rumphia 3 (1847) 129; Walp. Ann. 2 (1850) 217; Miq. Fl. Ind. Bat. 1² (1858-59) 576.

Schmidelia obovata A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 249; Walp. Ann. 4 (1857) 378, saltem quoad Philip.

Aporetica ternata Blanco Fl. Filip. (1837) 290, non Forst.

Aporetica gemella Blanco op. cit. ed. 2 (1845) 203, ed. 3, 2 (1878) 15, non DC.

Luzon (Zambales, Tayabas, Camarines, Sorsogon), Mindoro, Dumarán, Palawan, Balabac, Bancalan, Sibuyan, Masbate, Samar, Panay, Negros, Bohol, Mindanao, Sulu Archipelago. Common in thickets along the seashore. Formosa to the Nicobar Islands, Malay Peninsula and Archipelago, Samoa, and New Caledonia.

Local names: Handamo (Tag.); talipúngpung (Bik.).

ALLOPHYLUS TRIPHYLLUS (Burm. f.) Merr. in Philip. Journ. Sci. 19 (1921) 363.

Usubis triphylla Burm. f. Fl. Ind. (1768) 89, t. 32, f. 1.

Allophylus javensis Blume Rumphia 3 (1847) 126; Radlk. in Sitz. Kgl. Bayer. Akad. 38 (1908) 231, Philip. Journ. Sci. 8 (1913) Bot. 444.

Basilan, Palawan, Jolo, *B. S. 15489, 15486 Reillo*. In thickets at low altitudes. Malay Peninsula and Archipelago.

Local name: Sai-sai (Sul.).

ALLOPHYLUS UNIFOLIOLATUS Radlk. in Elm. Leaf. Philip. Bot. 1 (1907) 208, Sitz. Kgl. Bayer. Akad. 38 (1908) 227, Philip. Journ. Sci. 8 (1913) Bot. 443.

Leyte, *Elmer 7329*. In forests or thickets at low altitudes. Endemic.

EXCLUDED SPECIES

ALLOPHYLUS ZEYLANICUS Linn.; F.-Vill. Novis. App. (1880) 51.

3. **SAPINDUS** Tournefort

SAPINDUS SAPONARIA Linn. Sp. Pl. (1753) 367; DC. Prodr. 1 (1824) 607; Radlk. in Perk. Frag. Fl. Philip. (1904) 59 (f. *microcarpa* Radlk.), Philip. Journ. Sci. 8 (1913) Bot. 444; Merr. Sp. Blancoanae (1918) 238.

Quassia tricarpa Blanco Fl. Filip. (1837) 351, ed. 2 (1845) 206, ed. 3, 2 (1878) 94, t. 388 p. p.

Sapindus forsythii Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 401; F.-Vill. Novis. App. (1880) 53, non DC.

Sapindus turezaninowii Vidal Sinopsis Atlas (1883) 21, t. 34, f. A, Phan. Cuming. Philip. (1885) 105, Rev. Pl. Vasc. Filip. (1886) 96.

Luzon (Cagayan, Ilocos Norte, Ilocos Sur, Abra, Union, Pangasinan, Nueva Ecija, Zambales, Pampanga, Bataan, Rizal, Laguna), Mindanao (Cotabato). In secondary forests at low and medium altitudes, locally common. Pantropic.

The Philippine specimens are all forma *microcarpa* Radlk. in Mart. Fl. Bras. 13³ (1900) 517.

Local names: Amugáuen (Ilk.); kasibag (Ilk.); kasábai (Ilk.); katíkis (Tag.); katigis (Tag.); kasiben (Ilk.); kasibeng (Ibn., Ilk.); kusibeng (Ilk.); malahito (Tag.); malapalitpit (Pamp.); palikpik-hitó (Tag.); tika-tiká (Tag.); tikas-tikás (Tag.); tikis-tikis (Tag.).

EXCLUDED SPECIES

SAPINDUS TRIFOLIATUS Linn.; F.-Vill. Novis. App. (1880) 53.

4. **ERIOGLOSSUM** Blume

ERIOGLOSSUM RUBIGINOSUM (Roxb.) Blume Rumphia 3 (1847) 118; Radlk. in Perk. Frag. Fl. Philip. (1904) 60, Philip. Journ. Sci. 8 (1913) Bot. 444.

Sapindus rubiginosus Roxb. Pl. Coromandel 1 (1795) 44, t. 62.

Erioglossum edule Blume Rumphia 3 (1847) 118; Miq. Fl. Ind. Bat. 1² (1858-59) 574; F.-Vill. Novis. App. (1880) 51; Vidal Sinopsis Atlas (1883) 22, t. 35, f. H, Phan. Cuming. Philip. (1885) 104, Rev. Pl. Vasc. Filip. (1886) 94; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 34, Govt. Lab. Publ. (Philip.) 27 (1905) 34, Sp. Blancoanae (1918) 238.

- Sapindus edulis* Blume Cat. Gew. Buitenz. (1823) 64; Blanco Fl. Filip. ed. 2 (1845) 201, ed. 3, 2 (1878) 12, non Ait.
Moulinsia rubiginosa G. Don Gen. Syst. 1 (1831) 667; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 250.

Throughout the Philippines, in most provinces and islands. Common in forests at low and medium altitudes. India through Malaya to tropical Australia.

Local names: Aboi (P. Bis.); balinaúnau (P. Bis.); balít (C. Bis.); barít (P. Bis.); buli-buli (C. Bis., P. Bis.); buri-buri (P. Bis.); duka (Bis.); kalangkañgin (Tagk.); kaláyo (Tag.); kalimáiu (Tag.); lágui (Ting.); liñgarau (Tag.); magasilad (Mbo.); malaságing-putí (Tag.); palatangan-a-nalabága (Ilk.); tagurirong (P. Bis.); togoriron (P. Bis.); usau-usau (Sul.).

5. APHANIA Blume

APHANIA ANGUSTIFOLIA Radlk. in Leaf. Philip. Bot. 1 (1907) 209, Philip. Journ. Sci. 8 (1913) Bot. 444.

Luzon (Sorsogon), Samar, Leyte, *Elmer 7330, 15429, 15534, B. S. 24177, 24380 Ramos*. In primary forests at low altitudes. Endemic.

APHANIA LOHERI Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 444, 452.

Luzon (Cagayan, Tayabas, Pampanga, Rizal), *Loher 2056, 5874, Merrill 1433, Villegas 126, B. S. 13814 Ramos, F. B. 24123 Velasco*. In forests at low altitudes. Endemic.

Local names: Balinóno (Pamp.); bitúg (Pamp.).

APHANIA PHILIPPINENSIS Radlk. in Perk. Frag. Fl. Philip. (1904) 60, Philip. Journ. Sci. 8 (1913) Bot. 444.

Luzon (Camarines, Tayabas, Samar), Jolo, *Ahern 216 p. p., B. S. 26944 Edaña, Merrill Phil. Pl. 1634*. In forests at low altitudes. Endemic.

Local name: Onába (Bik.).

6. HEBECOCCUS Radlkofer

HEBECOCCUS FALCATUS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 444, 453.

Luzon (Tayabas, Camarines), Leyte, *F. B. 12631, 16976 Rosenbluth, 18689 Darling, 23711 Alvarez*. On forested slopes at low altitudes. Endemic.

HEBECOCCUS INAEQUALIS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 453.

Cebu, Basilan, *F. B. 6459 Everett, B. S. 16151 Reillo*. In forests up to 300 m altitude. Endemic. The third species of the genus is known only from Java.

Local name: Hagulian (C. Bis.).

7. LEPISANTHES Blume

LEPISANTHES ACUTISSIMA Radlk. in Philip. Journ. Sci. 20 (1922) 657.

Palawan, *Merrill 9564*. On dry forested slopes at low altitudes. Endemic.

LEPISANTHES ERIOLEPIS Radlk. in Act. Congr. Bot. Amsterdam 1877 (1878) 107 [Sapind. Holl.-Ind. 36, Nachtr. (1878) 86], Philip. Journ. Sci. 8 (1913) Bot. 445; Vidal Phan. Cuming. Philip. (1885) 105, Rev. Pl. Vasc. Filip. (1886) 95; F.-Vill. Novis. App. (1883) 349.

Luzon (Laguna, Tayabas, Camarines), Mindoro, *Cuming* 785, *B. S.* 12492, 22899 *McGregor*, 33663, 26588 *Ramos & Edaño*. In primary forests at low altitudes. Endemic.

Local name: Sarakag (Neg.).

LEPISANTHES MACROCARPA Radlk. in Philip. Journ. Sci. 20 (1922) 657.

Luzon (Tayabas), *B. S.* 19460 *Ramos*, *Elmer* 7893. On slopes in primary forests at low or medium altitudes. Endemic.

LEPISANTHES PALAWANICA Radlk. in Leaf. Philip. Bot. 5 (1913) 1604, Philip. Journ. Sci. 8 (1913) Bot. 445.

Palawan, *Elmer* 13046, *Merrill* 9376, *F. B.* 27925 *Cenabre*, *Paras*, & *Gellidon*. In primary forests at low altitudes. Endemic.

LEPISANTHES SCHIZOLEPIS Radlk. Sapind. Holl.-Ind. Nachtr. (1878) 87, Perk. Frag. Fl. Philip. (1904) 60, Philip. Journ. Sci. 8 (1913) Bot. 445 (incl. f. *sphenolepis* Radlk.); F.-Vill. Novis. App. (1883) 349.

Lepisanthes perviridis Elm. Leaf. Philip. Bot. 8 (1919) 3101.

Babuyan Islands, Luzon (Cagayan, Ilocos Norte, Nueva Ecija, Bulacan, Rizal, Laguna, Batangas, Camarines), Leyte, Negros, Mindanao (Agusan). In primary forests at low altitudes, widely scattered. Endemic.

Local names: Balúñgai (Tag.); bayag-dagá (Tag.); pamalatáñgen (Ilk.); pospós (Bik.).

LEPISANTHES VIRIDIS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445, 454.

Mindanao (Zamboanga), *F. B.* 9266 *Whitford & Hutchinson*, *B. S.* 37020 *Ramos & Edaño*. In primary forests at low altitudes. Endemic.

Local name: Biligas (Sub.).

EXCLUDED SPECIES

LEPISANTHES CUNEATA Hiern.; F.-Vill. Novis. App. (1883) 349.

LEPISANTHES MONTANA Blume; F.-Vill. l. c.

8. OTOPHORA Blume

OTOPHORA CAULIFLORA Merr. in Philip. Journ. Sci. 13 (1918) Bot. 24.

Luzon (Tayabas, east coast), *B. S.* 28561, 28533 *Ramos & Edaño*. In forests along streams at low altitudes. Endemic.

OTOPHORA FRUTICOSA (Roxb.) Blume *Rumphia* 3 (1847) 142; *Miq. Fl. Ind. Bat.* 1² (1858-59) 560; *Koord. & Val. Bijdr. Boom. Java* 9 (1903) 174; Radlk. in Perk. Frag. Fl. Philip. (1904) 61, Philip. Journ. Sci. 8 (1913) Bot. 445; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 87, *Fl. Manila* (1912) 305, *Sp. Blancoanae* (1918) 239.

Sapindus fruticosus Roxb. *Fl. Ind. ed.* 2, 2 (1832) 283.

Sapindus baccatus Blanco *Fl. Filip.* (1837) 290.

Koelreuteria edulis Blanco op. cit. ed. 2 (1845) 202, ed. 3, 2 (1878) 14, t. 110.

Capura pinnata Blanco Fl. Filip. (1837) 264; Vidal Phan. Cuming. Philip. (1885) 105, Rev. Pl. Vasc. Filip. (1886) 97.

Capura purpurata Blanco op. cit. ed. 2 (1845) 184, ed. 3, 1 (1877) 328.

Otolepis nigrescens Turcz. in Bull. Soc. Nat. Mosc. 21¹ (1848) 573; Miq. Fl. Ind. Bat. 1² (1858-59) 561.

Otophora blancoi Blume Rumphia 3 (1847) 142; Miq. Fl. Ind. Bat. 1² (1858-59) 560; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 259; F.-Vill. Novis. App. (1880) 52.

Otophora nigrescens F.-Vill. Novis. App. (1880) 52.

Capura nigrescens Vidal Cat. Pl. Prov. Manila (1880) 24, Sinopsis Atlas (1883) 21, t. 34, f. E.

Otophora paucijuga F.-Vill. Novis. App. (1880) 52, non Hiern.

Otophora pinnata Merr. in Philip. Bureau Forestry Bull. 1 (1903) 35.

Sapindus arborescens Llanos ex F.-Vill. & Naves in Blanco Fl. Filip. ed. 3, 4¹ (1880) 105, non Aubl.

Throughout the Philippines in thickets and secondary forests at low and medium altitudes. Siam, through Malaya to the Moluccas.

Local names: Ára (Ibn.); balanóno (Pamp., Tag.); balináunau (Tag., Pamp., P. Bis.); balingnokonoko (Tag.); buli-buli (P. Bis.); diríg (Ibn., Ilk.); laliñgod (Bag.); linaunáu (Tag.); lunau (Tag.); tagalínau (Tag.).

OTOPHORA OLIVIFORMIS Radlk. in Philip. Journ. Sci. 6 (1911) Bot. 181, 8 (1913) Bot. 445.

Polillo, Catanduanes, Bucas Grande, *B. S. 10330 McGregor, 30306 Ramos, 35109 Ramos & Pascasio*. In forests at low altitudes. Endemic.

OTOPHORA SETIGERA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445, 455.

Panay, Mindanao (Misamis), Malamaui, Basilan, *F. B. 4569 Mearns & Hutchinson, 25495 Ceballos, 30917 Ramos & Edaño*. In forests at low altitudes, ascending to 900 m. Endemic.

EXCLUDED SPECIES

OTOPHORA ERYTHROCALYX Hiern; F.-Vill. Novis. App. (1880) 52.

OTOPHORA SPECTABILIS Blume; F.-Vill. l. c.

9. TRISTIOPSIS Radlkofer

TRISTIOPSIS OBLONGA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445, 456.

Mindoro, *F. B. 4063 Merritt*. In forests at low altitudes. Endemic.

Local name: Tagom-tágom (Tag.).

TRISTIOPSIS OVATA Radlk. in Leaflet. Philip. Bot. 5 (1913) 1605, Philip. Journ. Sci. 8 (1913) Bot. 445.

Mindanao (Davao), *Elmer 11909*. In forests. Endemic.

Local name: Brayon (Bag.).

TRISTIOPSIS SUBFALCATA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445, 455.

Mindanao (Zamboanga), Basilan, Hallier, B. S. 16148 Reillo, F. B. 26126, 26127 Franco, 18886 Miranda. In forests at low altitudes. Endemic.

Local name: Gasi-gasi (Chab.).

Of this genus nine species are known, two in New Guinea, two in the Solomon Islands, one in the Marianne Islands, and one in Christmas Island south of Java.

10. TRISTIRA Radlkofer

TRISTIRA PUBESCENS Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 12; Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445, 456 (incl. f. *hemidasys* Radlk.).

Luzon (Rizal, Batangas, Camarines), Mindanao (Butuan), Merrill 2842, Phil. Pl. 1345, F. B. 421 Ahern's collector, 23515 Alvarez, B. S. 29520 Ramos & Edaña. In forests at low altitudes; scarcely more than a pubescent form of *T. triptera* Radlk. Endemic.

TRISTIRA TRIPTERA (Blanco) Radlk. in Act. Congr. Bot. Amsterdam 1877 (1878) 133 (Sapind. Holl.-Ind. 63), Philip. Journ. Sci. 8 (1913) Bot. 445; F.-Vill. Novis. App. (1883) 350; Vidal Phan. Cuming. Philip. (1885) 105, Rev. Pl. Vasc. Filip. (1886) 99; Merr. in Philip. Bureau Forestry Bull. 1 (1905) 35, Sp. Blancoanae (1918) 239.

Melicocca triptera Blanco Fl. Filip. (1837) 203, ed. 3, 2 (1878) 16.

Zollingeria macrocarpa F.-Vill. Novis. App. (1880) 53; Vidal Sinopsis Atlas (1883) 22, t. 35, f. C, non Kurz.

Zollingeria triptera Rolfe in Journ. Bot. 21 (1884) 309.

Luzon (Union, Rizal, Batangas, Camarines), Mindoro, Tablas, Catanduanes, Masbate, Romblon, Negros, Mindanao (Davao). In forests at low and medium altitudes. Endemic.

Local names: Albing (Tag.); alpai-bató (Tag.); daou (P. Bis.); kibang (P. Bis.); maladiak (Bik.); malaropág (Tag.).

One other species is known from Celebes and from the Moluccas.

EXCLUDED SPECIES

TRISTIRA HARPULLIOIDES Radlk.; F.-Vill. Novis. App. (1883) 350.

11. HEDYACHRAS Radlkofer

HEDYACHRAS PHILIPPINENSIS Radlk. in Engl. Bot. Jahrb. 56 (1920) 258, Philip. Journ. Sci. 20 (1922) 660, descr. ampl.

Luzon (Laguna), F. B. 20635 Villamil, 25719, 26180 Mabesa, Elmer 18288. In thickets and forests along streams at low altitudes. An endemic monotypic genus.

12. EUPHORIA Commerson

EUPHORIA DIDYMA Blanco Fl. Filip. (1837) 288, ed. 2 (1845) 201, ed. 3, 2 (1878) 10; Merr. Sp. Blancoanae (1918) 240.

Euphoria litchi Blanco op. cit. 285, 199, 8, non Juss.

? *Euphoria annularis* Blanco op. cit. 285, 199, 7.

Sapindus cinereus Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 402; F.-Vill. Novis. App. (1880) 53.

Euphoria cinerea Radlk. in Sitz. Kgl. Bayer. Akad. 8 (1878) 299, Perk. Frag. Fl. Philip. (1904) 61, Philip. Journ. Sci. 8 (1913) Bot. 445; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 87.

Nephelium longana F.-Vill. Novis. App. (1880) 53; Vidal Phan. Cuming. Philip. (1885) 105, Rev. Pl. Vasc. Filip. (1886) 98, non Camb.

Nephelium glabrum Vidal Sinopsis Atlas (1883) 22, t. 35, f. I, Rev. Pl. Vasc. Filip. (1886) 98, non Noronha.

Northern Luzon (Cagayan) to Palawan and Mindanao, in most or all islands and provinces, usually common in hill forests at low and medium altitudes. Endemic.

Local names: Alúpak (Tag., Sbl., P. Bis.); alípai (Tag.); alúpai (Tag.); alpái (Tag.); alúpag (Tag.); aniñguai (Pang.); apalong (Neg.); apá-lung (Ilk., Ibn.); arópag (P. Bis.); arópai (Tag.); árpai (Tag.); arúpai (Tag.); ayúpag (Tag.); bakkaláu (Ilk., Sbl.); bakalíu (Pang.); balít (P. Bis.); bayít (Tag.); boboa (Bik.); bolík (Chab.); bukkaláu (Ilk.); daging-díngan (S. L. Bis.); dimopá (Ibn.); gisihán (Tag.); halúpag (Tag.); halúpak (Bik., Tag.); kalúpai (Sbl.); kandongisol (Bik.); kuluris (Tagb.); lúpak (Bik.); lupal (Mag.); mamata (Sub.); marutong (Neg.); matamata (Sul.); paetan-bákir (Sbl.); panuto (Bik.); rupar (Bag.); sambualau (Bis.); tinaiñgi (Tag.); usau (S. L. Bis.).

EUPHORIA FOVEOLATA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445, 457.

Luzon (Cagayan), Samar, Panay, *B. S. 7370, 24337 Ramos, F. B. 25432 Sandique*. In forests at low altitudes. Endemic.

Local names: Bok-bok (P. Bis.); malapangnahauon (S. L. Bis.).

EUPHORIA GRACILIS Radlk. in Elm. Leaf. Philip. Bot. 5 (1913) 1606; Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445.

Luzon (Batangas, Camarines), Samar, Negros, Mindanao (Agusan, Cotabato, Zamboanga), Jolo, *Elmer 13482, Merrill Phil. Pl. 1916, B. S. 15803 Fénir, F. B. 22742 Lasquety, 20682 Tamesis, 23049 Ferraris, 28759 Simeon*. In hill forests at low and medium altitudes, ascending to 1,200 m. Endemic.

Local names: Alpai-laláki (Tag.); alúpai (Mag.); bakuyong (Sul.); bayít (Tag.); maglosong (S. L. Bis.); sanganan (Mbo.).

EUPHORIA LONGANA Lam. Encycl. 3 (1791) 574; Merr. Fl. Manila (1912) 305; Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445.

Luzon (Pampanga, Bataan, Manila), occasional in cultivation, introduced from southern China. It rarely produces flowers or fruits in the Philippines. India to southern China, planted in other regions.

Local name: Gingging (Tag., Pamp.).

EUPHORIA NEPHELIODES Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445, 457.

Nephelium schneideri Merr. op. cit. 13 (1918) Bot. 23.

Mindanao (Zamboanga, Lanao), Basilan, *F. B. 15218 Klemme, 13775 Foxworthy, DeMesa, & Villamil, 27186 Jimenez, 24052 Acuña*. In forests at low altitudes. Endemic.

Local names: Buli (Chab.); iboli (Lan.); lupak (Sul.); narog (Lan.); talimorok (Lan.).

EUPHORIA STELLULATA (Turcz.) Radlk. in Sitz. Kgl. Bayer. Akad. 8 (1878) 303, Philip. Journ. Sci. 8 (1913) Bot. 445; Vidal Phan. Cuming. Philip. (1885) 105, Rev. Pl. Vasc. Filip. (1886) 98.

Sapindus stellulatus Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 403; F.-Vill. Novis. App. (1880) 53 (*stellatus*).

Luzon (Sorsogon), Samar, Leyte, Mindanao, *Cuming 1704*, *Wenzel 880, 808*, *Elmer 16046*, *F. B. 20548 Miranda*. In forests at low altitudes; scarcely distinguishable from *E. didyma* Blanco. Borneo.

Local name: Louo (Bag.).

13. PSEUDONEPHELIUM Radlkofer

PSEUDONEPHELIUM FUMATUM (Blume) Radlk. Nachtr. Sapind. Holl.-Ind. (1878) 71, Philip. Journ. Sci. 8 (1913) Bot. 445.

Nephelium fumatum Blume Rumphia 3 (1847) 111.

Luzon (Cagayan, Apayao), *F. B. 6657 Klemme*, *B. S. 28236 Fénix*. In primary forests at low altitudes; a monotypic genus. Malay Peninsula, Borneo.

Local names: Mahúgis (Klg.); pamirígin (Ilk.).

14. LITCHI Sonnerat

LITCHI PHILIPPINENSIS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 445, 458 (incl. f. *mindanaensis* Radlk. l. c.), Engl. & Prantl Nat. Pflanzenfam. Nachtr. 3 (1907) 204.

Nephelium litchi F.-Vill. Novis. App. (1880) 53; Vidal Rev. Pl. Vasc. Filip. (1886) 97; Ceron Cat. Pl. Herb. Manila (1892) 54, non Camb.

Luzon (Zambales, Bataan, Pangasinan, Camarines, Albay), Sibuyan, Samar, Mindanao (Surigao, Agusan, Davao). In secondary and primary forests from about sea level to an altitude of 500 m. Endemic.

Local names: Alúpag-amo (Tag.); alúpag-kalabáu (Tag.); aniñguái (Pang.); baliok (Mbo., Bag.); balít (P. Bis.); balanḡas (Mbo.); bugna (Sul.); kagasakan (P. Bis.); kagasakas (Bik.); kamiñḡi (Tag.).

Litchi chinensis Sonn., the only other known species of the genus, is planted at Lamao and at Los Baños, but has as yet produced neither flowers nor fruits.

15. NEPHELIUM Linnaeus

NEPHELIUM CHRYSSEUM Blume Rumphia 3 (1847) 105; Radlk. in Leaflet. Philip. Bot. 5 (1913) 1616, Philip. Journ. Sci. 8 (1913) 445.

Palawan, *Elmer 12882*. In forests. Burma and Indo-China, Malay Peninsula, Sumatra, Borneo.

NEPHELIUM INTERMEDIUM Radlk. in Perk. Frag. Fl. Philip. (1904) 61, Philip. Journ. Sci. 8 (1913) Bot. 445.

Luzon (Camarines), Mindanao, Basilan, Jolo, *Ahern 204*, *Warburg 11672*, *F. B. 15218 Klemme*, *21914 Oliveros*, *B. S. 15451 Reillo*. In forests. Endemic.

Local names: Lupak (Sul.); sahaan (Chab.).

NEPHELIUM LAPPACEUM Linn. Mant. 2 (1771) 566; Radlk. in Leaflet. Philip. Bot. 5 (1913) 1616, Philip. Journ. Sci. 8 (1913) Bot. 445.

Palawan, Jolo, *Elmer 12866, 13062, 13069, Wester*. In forests; planted by the Moros in Jolo. India to Indo-China and Malaya.

Local name: Usáre (Sul.).

NEPHELIUM MUTABILE Blume Rumphia 3 (1847) 104; Koord. & Val. Bijdr. Boom. Java 9 (1903) 192; Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446.

? *Nephelium glabrum* F.-Vill. Novis. App. (1880) 53, non Noronha.

Cubilia blancoi Vidal Sinopsis Atlas (1883) 22, t. 35, f. F, Rev. Pl. Vasc. Filip. (1886) 96, non Blume.

Northern Luzon (Cagayan) to Mindanao. In primary forests at low and medium altitudes in most islands and provinces. Malay Peninsula, Sumatra, Java, Borneo.

Local names: Bakkaláu (Ilk.); bali (Sul.); bulála (Tag., Bik.); karáyo (Tag.); laguan (Tag.); lintias (Tag.); litsía (Chab.); marañgis (Klg.); pangyau (Tag.); panongian (Tag.); potian (S. L. Bis.); santias (Tag.).

NEPHELIUM ROBUSTUM Radlk. in Leaf. Philip. Bot. 5 (1913) 1607, Philip. Journ. Sci. 8 (1913) Bot. 446.

Palawan, *Elmer 12934*. In forests. Endemic.

NEPHELIUM XEROSPERMOIDES Radlk. in Leaf. Philip. Bot. 5 (1913) 1608, Philip. Journ. Sci. 8 (1913) Bot. 446.

Mindanao (Davao, Bukidnon, Zamboanga), Basilan, *F. B. 15215 Klemme, 25811 Tecson & Roque, Elmer 11205, Wester*. In forests at low and medium altitudes. Endemic.

Local names: Aluau (Buk.); luou (Bag.); oloau (Buk.).

16. CUBILIA Blume

CUBILIA BLANCOI Blume Rumphia 3 (1847) 101; Miq. Fl. Ind. Bat. 1^a (1858-59) 553; Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 35, Interpret. Herb. Amb. (1917) 338, Sp. Blancoanae (1918) 240.

Euphoria cubili Blanco Fl. Filip. (1837) 287, ed. 2 (1845) 200, ed. 3, 3 (1878) 10.

Cubilia rumphii Blume Rumphia 3 (1847) 101; Miq. Fl. Ind. Bat. 1^a (1858-59) 553; F.-Vill. Novis. App. (1880) 52; Koord. in Ic. Bogor. 1 (1901) 51, t. 92, 93.

Luzon (Cagayan, Benguet, Bulacan, Rizal, Bataan, Laguna), Biliran, Samar, Mindanao (Surigao, Agusan, Zamboanga), *Merrill Sp. Blancoanae 705, Warburg 11673, F. B. 25925 Leuterio, 2975, 445, 1996 Ahern's collector, B. S. 21663 Ramos, Elmer 13262*. In primary forests at medium altitudes. A monotypic genus. Celebes, Moluccas.

Local names: Atilang (Ig.); baksian (Mbo.); ebúli (Tag.); kabíli' (Tag.); kubíli' (Tag.); lubilubí (Tag.); malaságing (Tag.); tabas (S. L. Bis.).

17. POMETIA Forster

POMETIA PINNATA Forst. Char. Gen. (1776) 109, t. 55; Koord. & Val. Bijdr. Boom. Java 9 (1903) 196; Merr. in Philip. Journ. Sci. 3 (1908) Bot. 418; Radlk. op. cit. 8 (1913) Bot. 445.

Irina glabra Blume Bijdr. (1825) 230.

Aporetica pinnata DC. Prodr. 1 (1824) 610.

Babuyan Islands, Luzon (Cagayan, Ilocos Norte, Bataan, Laguna), Mindoro, Palawan, Ticao, Masbate, Leyte, Samar, Negros, Cebu, Mindanao. In forests, often along streams, at low and medium altitudes. Malay Peninsula and Archipelago to New Guinea and Polynesia.

Local names: Agupánga (Tag.); aklám (Tag.); alipánga (Tagb.); aloiho (S. L. Bis.); alaihou (P. Bis.); balambánan (Ilk.); bankálan (C. Bis.); bankéd (Tag.); bantañgali (Mbo.); bayóto (Kuy., P. Bis.); bayúto (Tagb.); bidóso (Mang.); bióso (Mang.); gia-gia (C. Bis.); hipánga (Tagb.); ibo (P. Bis.); ibu (C. Bis., Bag.); kabakabót (Ig.); karunyan (Tag.); kia-kia (S. L. Bis.); kugik (Bik.); lupánga (Sul.); madalo (Neg.); malúgai (Tag.); malaguás (Bik.); mamako (Bag.); manggis (Tagb.); mansanab (P. Bis.); minanukai (P. Bis.); oyakya (Tag., P. Bis.); sádai (Ilk.); sídai (Ilk.); takúgan (P. Bis.); takúpan (Bik.); tanóbong (Mang.); tigáui (P. Bis., Bik.); tugáui (Bik., P. Bis.).

POMETIA TOMENTOSA (Blume) Teysm. & Binn. Cat. Hort. Bogor. (1886) 214; F.-Vill. Novis. App. (1883) 350; Koord. & Val. in Meded. Lands Plantent. 61 (1903) 199.

Irina tomentosa Blume Bijdr. (1825) 230, Rumphia 3 (1847) 283.

Luzon (Camarines), Samar. In forests at low altitudes. Java, Borneo. Local names: Alaiuhau (S. L. Bis.); tugáui (Tag., Bik.).

18. ALECTRYON Gaertner

ALECTRYON EXCISUS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 460.

Tinago, *Ahern* 470. In thickets or forests at low altitudes. Endemic. Local name: Gisuk (C. Bis.).

ALECTRYON FUSCUS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 461.

Luzon (Bataan, Ilocos Sur), *Ahern* 747, *F. B.* 23604, 25472 *Paraíso*. In thickets or forests at low altitudes. Endemic.

Local names: Pañgoásen (Ilk.); ugatan (Ting.).

ALECTRYON INAEQUILATERUS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 459.

Sulu Archipelago (Ubian), *Merrill* 5393. In thickets near the seashore. Endemic.

ALECTRYON OCHRACEUS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 460.

Negros, *F. B.* 17455 *Curran*. On cliffs back of the beach. Endemic.

19. GUIOA Cavanilles

GUIOA ACUMINATA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 463.

Luzon (Laguna, Camarines), *B. S.* 10916 *Ramos*, 21140, 21144 *Miranda*, 15356 *Tamesis*. In forests at low altitudes. Endemic.

Local names: Anáyen (Tag.); pasi (Bik.).

GUIOA APTERA Radlk. in Perk. Frag. Fl. Philip. (1904) 62, Philip. Journ. Sci. 8 (1913) Bot. 446; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 87.

Guioa lasiothyrsa Radlk. forma *clmeri* Radlk. in Leaf. Philip. Bot. 5 (1913) 1609.

Luzon (Cagayan, Bataan, Laguna, Tayabas, Camarines), Negros, Panay, Leyte, Mindanao (Zamboanga), *F. B. 141 Barnes, 2785 Meyer, 26829 Catalan, 21163 Miranda, 26636 Velasco, B. S. 7412, 31246, 28677, 20612, 20611, 17542, 24554, 37235, 36871 Ramos & Edaña, Williams 609, 741, Elmer 9315, 9342, 15828, 15516, 15565, 9827, Merrill 3718, Warburg 11504*. In primary forests at low and medium altitudes. Endemic.

Local names: Dayendiñgan (S. L. Bis.); ímug (Ibn.); pamatúten (Ibn.); panagisen (Ibn.); salisi (Sub.); tibau (Sml.).

GUIOA BICOLOR Merr. in Philip. Journ. Sci. 17 (1920) 279.

Mindanao (Surigao), *B. S. 34487 Ramos & Pascasio*. On slopes, altitude about 780 m. Endemic.

GUIOA DIPLOPETALA (Hassk.) Radlk. Nachtr. Sapind. Holl. Ind. (1878) 88, Perk. Frag. Fl. Philip. (1904) 63, Philip. Journ. Sci. 8 (1913) Bot. 446; Koord. & Val. Bijdr. Boom. Jav. 9 (1903) 207.

Cupania diplopetala Hassk. in Flora 25 (1842) Beibl. 39, Pl. Jav. Rar. (1848) 286.

Mindanao (Surigao), *Ahern 514*. In thickets or forests at low altitudes. Indo-China, Sunda Islands, Moluccas.

Local name: Magolibas (C. Bis.).

GUIOA DISCOLOR Radlk. in Leaflet. Philip. Bot. 5 (1913) 1609, Philip. Journ. Sci. 8 (1913) Bot. 446.

Luzon (Tayabas), *Elmer 7493, 9321, B. S. 25450, 25469 Yates*. In forests up to 550 m altitude. Endemic.

GUIOA FALCATA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 461.

Luzon (Benguet), *Elmer 5869, Sandkuhl 351*. In thickets, altitude 1,200 to 1,600 m. Endemic.

GUIOA GLAUCA (Labill.) Radlk. in Act. Congr. Bot. Amsterdam 1877 (1878) 108 (Sapind. Holl.-Ind. 38), Philip. Journ. Sci. 8 (1913) Bot. 446.

Dimereza glauca Labill. Sert. Austr. Caled. (1824) 51, t. 51.

Palawan, *B. S. 562, 697 Foxworthy, F. B. 3874 Curran*. On the higher mountains at and above 1,000 m altitude. New Caledonia.

Local name: Bunsikag (Tagb.).

GUIOA KOELREUTERIA (Blanco) Merr. Sp. Blancoanae (1918) 241.

Sapindus koelreuteria Blanco Fl. Filip. (1837) 289.

Koelreuteria arborea Blanco op. cit. ed. 2 (1845) 202, ed. 3, 2 (1878) 13.

Quassia simaruba Blanco op. cit. ed. 2 (1845) 247, ed. 3, 2 (1878) 94, non Linn.

Hemiggyrosa perrottetii Blume Rumphia 3 (1847) 165; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 251; Miq. Fl. Ind. Bat. 1² (1858-59) 568; Walp. Ann. 2 (1850-51) 212; F.-Vill. Novis. App. (1880) 50.

Guioa perrottetii Radlk. in Act. Congr. Bot. Amsterdam 1877 (1878) 108 (Sapind. Holl.-Ind. 38); Perk. Frag. Fl. Philip. (1904) 63, Philip. Journ. Sci. 8 (1913) Bot. 446; Vidal Rev. Pl. Vasc. Filip. (1886) 95; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 87, 5 (1910) Bot. 359, Fl. Manila (1912) 306.

Cupania regularis Vidal Cat. Pl. Prov. Manila (1880) 24, Sinopsis Atlas (1883) 21, t. 34, f. B; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 251; Miq. Fl. Ind. Bat. 1² (1858-59) 568; Walp. Ann. 2 (1850-51) 212; F.-Vill. Novis. App. (1880) 50, non Blume.

Northern Luzon (Cagayan) to Balabac and Mindanao, in most or all islands and provinces. Common in second-growth forests at low and medium altitudes. Endemic.

Local names: Alásan (Tag.); anáyen (Tag.); angsét (Ilk.); anóyen (Tag.); baṅgil (Sbl.); basai (P. Bis.); busikag (Sul.); daṅgalis (Tagb.); gisi-gisi (Sbl.); hualis (Tag.); kamotelen (Pang.); kanínging (Mang.); kásai (P. Bis.); alahabi (Sbl.); malasankí (Tag.); malaúas (Tag.); marintok (Tagb.); nisi-nisi (Sbl.); ṅgisi-ṅgisi (Tag.); pamotólen (Pang.); paksion (P. Bis.); pasi (Bik.); saláb (Tag., Bik.); saláp (Pang., Tag.); salúb (Tag.); ulas (Ig.); uyos (C. Bis.).

GUIOA LASIOTHYRSA Radlk. in Perk. Frag. Fl. Philip. (1904) 63, Philip. Journ. Sci. 8 (1913) Bot. 446.

Palawan, *Merrill 852*. In forests, altitude about 300 m. Endemic.

Luzon material, so named, and f. *elmeri* Radlk. I refer to *Guioa aptera* Radlk.

GUIOA MINDORENSIS Merr. in Philip. Journ. Sci. 20 (1922) 404.

Mindoro, *B. S. 39639 Ramos*. On forested slopes, altitude 550 m. Endemic.

GUIOA MYRIADENIA Radlk. in Elm. Leaf. Philip. Bot. 5 (1913) 1610, Philip. Journ. Sci. 8 (1913) Bot. 446.

Luzon (Benguet, Bontoc), *Loher 2063*, *Merrill 9650*, *Phil. Pl. 723*, *Vanoverbergh 2706*. In thickets and ravines, from 1,300 to 1,700 m altitude. Endemic.

GUIOA OBTUSA Merr. in Philip. Journ. Sci. 12 (1917) Bot. 276.

Luzon (Tayabas, east coast), *B. S. 26636 Ramos & Edaño*. In forests, altitude about 270 m. Endemic.

GUIOA PARVIFOLIOLA Merr. in Philip. Journ. Sci. 14 (1919) 417.

Luzon (Ilocos Norte), *F. B. 73187 Ramos*. On dry slopes, altitude about 700 m. Endemic.

GUIOA PLEUROPTERIS (Blume) Radlk. in Act. Congr. Bot. Amsterdam 1877 (1878) 109 (Sapind. Holl.-Ind. 39), Perk. Frag. Fl. Philip. (1904) 63, Philip. Journ. Sci. 8 (1913) Bot. 446; Merr. Sp. Blancoanae (1918) 241.

Cupania pleuropteris Blume Rumphia 3 (1847) 158; F.-Vill. Novis. App. (1880) 51.

Erioglossum cuneifolium Blume Rumphia 3 (1847) 118, in nota.

Sapindus saponaria Blanco Fl. Filip. (1837) 288, non Linn.

? *Sapindus guisian* Blanco op. cit. ed. 2 (1845) 201, ed. 3, 2 (1878) 11.

Dittelasma rarak F.-Vill. Novis. App. (1880) 51, non Hook. f.

Palawan, Mindanao (Lanao), *Elmer 12611*, *Merrill 762*, *Clemens 343*, *F. B. 3523 Curran*, *F. B. 25185 Alvarez*. In thickets and forests at low altitudes, ascending to 800 m. Malay Peninsula, Indo-China, Sumatra, Borneo.

Local name: Bunsikag (Tagb.).

GUIOA PUBESCENS (Zoll. & Mor.) Radlk. in Act. Congr. Bot. Amsterdam 1877 (1878) 109 (Sapind. Holl.-Ind. 39), Elm. Leaf. Philip. Bot. 5 (1913) 1616, Philip. Journ. Sci. 8 (1913) Bot. 446.

Sapindus pubescens Zoll. & Mor. Syst. Verz. Zoll. Pfl. (1854) 22; Walp. Ann. 1 (1848) 134.

Palawan, *Elmer 13103*. In forests, altitude about 600 m. Malay Peninsula, Sumatra, Bangka, Java.

GUIOA RETICULATA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 462.

Luzon (Abra, Benguet, Ilocos Sur, Nueva Ecija), *B. S. 7055, 5590 Ramos, 26462 Ramos & Edaño, 14058 Merritt & Darling*. In forested ravines, altitude 600 to 1,200 m. Endemic.

GUIOA SALICIFOLIA Radlk. in Leaf. Philip. Bot. 5 (1913) 1608, Philip. Journ. Sci. 8 (1913) Bot. 446.

Sibuyan, *Elmer 12286*. In forests. Endemic.

Local name: Talimanók (P. Bis.).

GUIOA SUBAPICULATA Radlk. in Perk. Frag. Fl. Philip. (1904) 64, Philip. Journ. Sci. 8 (1913) Bot. 446.

Culion, Palawan, *Merrill 513, 9238, Elmer 12797*. In dry thickets at low altitudes.

GUIOA SULPHUREA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 462.

Luzon (Nueva Ecija), *F. B. 22429 Alvarez*. On forested slopes; apparently very close to *Guioa koelreuteria* (Blanco) Merr. Endemic.

GUIOA TRUNCATA Radlk. in Leaf. Philip. Bot. 5 (1913) 1611, Philip. Journ. Sci. 8 (1913) Bot. 446.

Mindanao (Davao), *Elmer 11219*. In forests. Endemic.

DOUBTFUL AND EXCLUDED SPECIES

CUPANIA FUSCICULA Kurz; F.-Vill. Novis. App. (1880) 51.

CUPANIA GLABRATA Kurz; F.-Vill. l. c.

CUPANIA PALLIDULA Hiern; F.-Vill. op. cit. 51.

CUPANIA SUMATRANA F.-Vill. op. cit. 52; Vidal Sinopsis Atlas (1883) 21, t. 34, f. D, non Miq.

I do not recognize the form Vidal figures, fruit only, but it is safely not Miquel's species.

20. GLOEOCARPUS Radlkofer

GLOEOCARPUS PATENTIVALVIS (Radlk.) Radlk. in Engl. Bot. Jahrb. 56 (1920) 253, in nota.

Cupaniopsis patentivalvis Radlk. in Elm. Leaf. Philip. Bot. 5 (1913) 1612, Philip. Journ. Sci. 8 (1913) Bot. 446.

Gloeocarpus crenatus Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 465 (Jan. 1914).

Luzon (Tayabas, Laguna, Sorsogon), *Elmer 7844, 15058, 15176* as *G. philippinensis* Elm., *Merrill Phil. Pl. 1321, B. S. 19458, 23799, 23442 Ramos, F. B. 24988 Labitag*. In primary forests at low and medium altitudes. An endemic monotypic genus.

Local name: Igíu (Tag.).

21. RHYSOTOECHIA Radlkofer

RHYSOTOECHIA ACUMINATA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 465.

Luzon (Bulacan, Rizal), *Loher 5882*, *B. S. 34146* Ramos & *Edaño*. On forested slopes at low and medium altitudes. Endemic.

RHYSOTOECHIA STRIATA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 446, 466.

Samar, Mindanao (Lanao), *Clemens 778, 978, 1067*, *B. S. 17481* Ramos. On forested slopes, up to an altitude of about 750 m. Endemic.

22. DICTYONEURA Blume

DICTYONEURA PHILIPPINENSIS Radlk. in Leaf. Philip. Bot. 5 (1913) 1613, Philip. Journ. Sci. 8 (1913) Bot. 446.

Samar, Camiguin de Misamis, Mindanao, Basilan, *Clemens 567, 347, 532, 1075*, *B. S. 17644, 24569, 14686, 11458* Ramos, *15711 Félix*, *30162* Ramos & *Edaño*, *Elmer 10965*. In primary forests at low and medium altitudes. Endemic.

Local names: Kalabagtik (Buk.); kubau (C. Bis.); lipat (Buk.); mala-búnglas (S. L. Bis.); nosip (Bag.); uñgali (S. L. Bis.).

DICTYONEURA RHOMBOIDEA Radlk. in Philip. Journ. Sci. 6 (1911) Bot. 182, 8 (1913) Bot. 446.

Polillo, Samar, *B. S. 10359* McGregor, *24423* Ramos, *Sablaya 49*. In forests at low altitudes. Endemic.

Local name: Buyokok (S. L. Bis.).

DICTYONEURA SPHAEROCARPA Radlk. in Leaf. Philip. Bot. 1 (1907) 209, Philip. Journ. Sci. 8 (1913) Bot. 446, Engl. Bot. Jahrb. 56 (1920) 292; Koord. in Nova Guinea 8 (1909) 172.

Leyte, *Elmer 7157*, *Wenzel 1683*. In thickets at low altitudes. New Guinea.

23. EUPHORIANTHUS Radlkofer

EUPHORIANTHUS OBTUSATUS Radlk. ex Koord. in Meded. Lands Plantent. 17 (1898) 406, *nomen*, Engl. & Prantl Nat. Pflanzenfam. Nachtr. 3 (1907) 306, *nomen*, Philip. Journ. Sci. 20 (1922) 660, descr.

Mindanao (Davao, Cotabato), *F. B. 18274* Miranda (det. Radlkofer), *27661* DeMesa. In forests at low altitudes. Celebes.

The genus is otherwise represented by *E. longifolius* (Roxb.) Radlk. in Celebes, Moluccas, New Guinea, and New Hebrides, and by *E. pallidus* Radlk., in New Guinea.

24. TRIGONACHRAS Radlkofer

TRIGONACHRAS BRACHYCARPA Radlk. in Elm. Leaf. Philip. Bot. 5 (1913) 1614, Philip. Journ. Sci. 8 (1913) Bot. 447.

Mindanao (Davao), *Elmer 10949* as *T. apoensis* Elm. In forests, altitude about 500 m. Endemic.

Local name: Tapotasa (Bag.).

TRIGONACHRAS CULTRATA (Turcz.) Radlk. in Act. Congr. Bot. Amsterdam 1877 (1878) 116 (Sapind. Holl.-Ind. 46), Philip. Journ. Sci. 8 (1913) Bot. 447; Vidal Rev. Pl. Vasc. Filip. (1886) 96.

Sapindus cultratus Turcz. in Bull. Soc. Nat. Mosc. 31¹ (1858) 403; F.-Vill. Novis. App. (1880) 53.

Luzon (Cagayan, Tarlac, Tayabas), *Cuming 1304, F. B. 24107 Bernardo, 26968 Velasco, 26022 Cailipan*. In primary forests at low altitudes. Endemic.

Local name: Daruñgá (Ilk.).

TRIGONACHRAS CUSPIDATA Radlk. in Philip. Journ. Sci. 6 (1911) Bot. 182, 8 (1913) Bot. 447.

Polillo, *F. B. 1411 Hagger*. In forests at low altitudes. Endemic.

Local name: Saláb (Tag.).

TRIGONACHRAS FALCATO-CUSPIDATA Radlk. in Philip. Journ. Sci. 20 (1922) 661.

Luzon (Laguna, Tayabas, Camarines), Mindanao (Surigao), *B. S. 14920, 20467 Ramos, 28633, 34738 Ramos & Edaño*. In primary forests at low altitudes; scarcely distinguishable from *T. cuspidata* Radlk. Endemic.

TRIGONACHRAS MEMBRANACEA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447, 468.

Luzon (Sorsogon), Ticao, Romblon, Tablas, Panay, *F. B. 1073 Clark, B. S. 35525 Ramos & Edaño, Elmer 16424*. On forested slopes at low altitudes. Endemic.

TRIGONACHRAS OBLIQUA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447, 467.

Luzon (Cagayan), *F. B. 13108 Bernardo*. In forests near the seashore. Endemic.

Local names: Lasilásan (Ilk.); ñgaratñgát (Neg.).

TRIGONACHRAS RIGIDA Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447, 467.

Luzon (Zambales, Camarines), *F. B. 18727 Darling, Merrill 2967*. In forests at low altitudes. Endemic.

Local names: Balakatan (Sbl.); kamatog (Bik.).

TRIGONACHRAS SPECTABILIS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447, 469.

Leyte, Mindanao (Agusan, Surigao, Bukidnon), *Weber 1194, Wenzel 226, Elmer 13657, B. S. 21514 Escritor*. In primary forests at low altitudes. Endemic.

Local names: Alilihau (Buk.); boyañgiang (Mbo.).

25. ELATTOSTACHYS Radlkofer

ELATTOSTACHYS VERRUCOSA (Blume) Radlk. Act. Congr. Bot. Amsterdam 1877 (1878) 113 (Sapind. Holl.-Ind. 43), Sitz. Kgl. Bayer. Akad. 9 (1879) 601; Vidal Rev. Pl. Vasc. Filip. (1886) 95; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 35, Philip. Journ. Sci. 3 (1908) Bot. 418; Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447.

Cupania verrucosa Blume Rumphia 3 (1847) 161; Rolfe in Journ. Bot. 23 (1885) 211; Vidal Phan. Cuming. Philip. (1885) 105.

Luzon (Cagayan, Ilocos Norte, Ilocos Sur, Union, Benguet, Rizal, Laguna, Batangas), Palawan, Ticao, Babuyan Islands, Mindanao, Basilan. In forests at low and medium altitudes, ascending to 1,200 m. Java, Celebes, Timor.

Local names: Baniui (Tag.); kamágsang-áso (Tag.); kaniui (Tag.); takagayáng (Ibn.).

26. ARYTERA Blume

ARYTERA LITORALIS Blume Rumphia 3 (1847) 170; Radlk. in Perk. Frag. Fl. Philip. (1904) 64, Philip. Journ. Sci. 8 (1913) Bot. 447; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 87, Fl. Manila (1912) 306, Sp. Blancoanae (1918) 241.

Ratonia litoralis F.-Vill. Novis. App. (1880) 52; Vidal Phan. Cuming. Philip. (1885) 105.

Ratonia montana F.-Vill. Novis. App. (1880) 52; Vidal Sinopsis Atlas (1883) 22, t. 35, f. D, non *Arytera montana* Blume.

Throughout the Philippines. Common in thickets and secondary forests at low and medium altitudes. Burma to southern China through Malaya to New Guinea.

Local names: Alásan (Tag.); amaya (Tag.); balit (P. Bis.); bilit (Tag.); balitan-han (P. Bis.); baniksil (Bik.); barit (P. Bis.); diladila-áso (Pamp.); kahuali (Sul.); maganabaga (Tag.); maganak-na-solo (Tag.); sala-sála (Sul.); uló (Ibn.).

Forma **RUFESCENS** (Turcz.) Radlk. ex Gibbs in Journ. Linn. Soc. Bot. 42 (1914) 65.

Zygolepis rufescens Turcz. in Bull. Soc. Nat. Mosc. 21¹ (1848) 574; Walp. Ann. 2 (1850) 212; Miq. Fl. Ind. Bat. 1² (1858-59) 563.

Ratonia zygolepis Turcz. in Bull. Soc. Nat. Mosc. 36¹ (1863) 586; Vidal Phan. Cuming. Philip. (1885) 105.

Arytera rufescens Radlk. Act. Congr. Bot. Amsterdam 1877 (1878) 114 (Sapind. Holl.-Ind. 44), Philip. Journ. Sci. 8 (1913) Bot. 447; Vidal Rev. Pl. Vasc. Filip. (1886) 96.

Ratonia rufescens F.-Vill. Novis. App. (1880) 52.

Luzon (Cagayan, Sorsogon), Marinduque, Panay, Cebu. In thickets; scarcely distinguishable from the species. Borneo, Celebes.

27. GONGROSPERMUM Radlkofer

GONGROSPERMUM PHILIPPINENSE Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447.

Luzon (Laguna), *B. S. 12358 McGregor*. On forested slopes at low altitudes. A monotypic endemic genus.

28. MISCHOCARPUS Blume

MISCHOCARPUS BRACHYPHYLLUS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447, 472.

Luzon (Cagayan, Abra, Bontoc, Benguet), *F. B. 4858 Curran, 14615 Darling, 23301, 23307 Velasco, 21845 Leaño, Vanoverbergh 1175, 3907*. In forests up to an altitude of 1,650 m. Endemic.

Local name: Kasau (Ting.).

MISCHOCARPUS CAULIFLORUS Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447, 471.

Mindoro, *McGregor 271*. In forests at low altitudes. Endemic.

MISCHOCARPUS ELLIPTICUS Radlk. in Leaflet. Philip. Bot. 1 (1907) 210, Philip. Journ. Sci. 8 (1913) Bot. 447.

Mischocarpus sublaevis Radlk. in Philip. Journ. Sci. 20 (1922) 662.

Leyte, Samar, *Elmer 7271*, *Wenzel 660, 1013*, *B. S. 17481 Ramos*. In forests at low altitudes. Endemic.

MISCHOCARPUS ENDOTRICHUS Radlk. in Leaflet. Philip. Bot. 5 (1913) 1615, Philip. Journ. Sci. 8 (1913) Bot. 447.

Palawan, *Elmer 12977*. In forests, altitude about 600 m. Endemic.

MISCHOCARPUS FUSCESCENS Blume Rumphia 3 (1847) 169; Koord. & Val. Bijdr. Boom. Java 9 (1903) 221; Vidal Rev. Pl. Vasc. Filip. (1886) 95, Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 87; Radlk. op. cit. 8 (1913) Bot. 447, 471.

Schleichera subundulata Turcz. in Bull. Soc. Nat. Mosc. 21¹ (1848) 574.

Cupania subundulata Rolfe in Journ. Bot. 23 (1885) 211; Vidal Phan. Cuming. Philip. (1886) 105.

Northern Luzon (Cagayan) to Palawan and Mindanao. Often rather common in secondary forests at low altitudes. Assam to Indo-China southward to Java and Borneo.

Local names: Ambálag (Ilk.); baliang-baliang (Neg.); dapil (Tag.); malatado (Bag.); urangdang (Lan.).

MISCHOCARPUS SALICIFOLIUS Radlk. in Perk. Frag. Fl. Philip. (1904) 64, Philip. Journ. Sci. 8 (1913) Bot. 447.

Luzon (Rizal, Camarines), *Merrill 1856, 1842*, *Loher 5886*, *F. B. 3189*, *3361 Ahern's collector, 21152 Miranda*. In forests at medium altitudes. Endemic.

MISCHOCARPUS SUNDAICUS Blume Bijdr. (1825) 238, Rumphia 3 (1847) 167; Vidal Rev. Pl. Vasc. Filip. (1886) 96; Koord. & Val. Bijdr. Boom. Java 9 (1903) 224; Radlk. in Perk. Frag. Fl. Philip. (1904) 65, Philip. Journ. Sci. 8 (1913) Bot. 447.

Cupania lessertiana Camb. in Mém. Mus. Paris 18 (1829) 46, t. 3; F.-Vill. Novis. App. (1880) 52.

Ratonia lessertiana Benth. & Hook. f. ex Hiern in Hook. f. Fl. Brit. Ind. 1 (1875) 678, in syn.; Vidal Phan. Cuming. Philip. (1885) 105.

Schleichera revoluta Turcz. in Bull. Soc. Nat. Mosc. 21¹ (1848) 575.

Cupania revoluta Rolfe in Journ. Bot. 23 (1885) 211; Vidal Phan. Cuming. Philip. (1885) 105.

Luzon (Ilocos Norte, Rizal, Laguna, Batangas, Nueva Ecija, Camarines, Tayabas, Sorsogon (incl. *Elmer 17092, 17116*, *M. vulcanicus* Elm.), Polillo, Palawan, Mindanao, Basilan. In thickets and forests at low altitudes. Malay Peninsula to southern China southward through Malaya to tropical Australia.

Local name: Malasaláb (Tag.).

MISCHOCARPUS TRIQUETER Radlk. in Perk. Frag. Fl. Philip. (1904) 65, Philip. Journ. Sci. 8 (1913) Bot. 447.

Luzon (Rizal, Bulacan, Bataan, Laguna, Tayabas, Camarines), Mindoro, Guimaras, Panay, Negros. In forests at low altitudes, ascending to 500 m. Endemic.

Local names: Kalam (Tag.); kuling-manók (Tag.).

29. LEPIDOPETALUM Blume

LEPIDOPETALUM PERROTTETII (Camb.) Blume Rumphia 3 (1847) 171; Walp. Ann. 2 (1850-51) 218; Miq. Fl. Ind. Bat. 1² (1858-59) 569; Vidal Rev. Pl. Vasc. Filip. (1886) 96; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 88, Sp. Blancoanae (1918) 242; Radlk. in Perk. Frag. Fl. Philip. (1904) 66, Philip. Journ. Sci. 8 (1913) Bot. 447. *Cupania perrottetii* Camb. in Mém. Mus. Hist. Nat. Paris 18 (1829) 46, t. 3; Walp. Repert. 1 (1842) 418.

Molinaea arborea Blanco Fl. Filip. (1837) 292, ed. 2 (1845) 204, ed. 3, 2 (1878) 18.

Lachnometalum glabrum Turcz. in Bull. Soc. Nat. Mosc. 21¹ (1848) 571, Miq. Fl. Ind. Bat. 1² (1858-59) 557.

Ratonia lachnometala Turcz. in Bull. Soc. Nat. Mosc. 36¹ (1863) 586; Vidal Phan. Cuming. Philip. (1885) 105.

Cupania richii A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 257; Walp. Ann. 4 (1857) 380; F.-Vill. Novis. App. (1880) 52.

Hemigyrosa canescens F.-Vill. Novis. App. (1880) 51, non Thwaites.

Northern Luzon (Cagayan) to Mindanao and Basilan. Often common in thickets and secondary forests at low altitudes. Key, Timorlaut.

Local names: Aláhan (Tag.); amáya (Tag.); bugas (P. Bis.); dapil (Tag.); hualis (Tag.); marinsiano (Mag.); lupangga (Sul.); ngisi-ngisi (Tag.); oás (Ilk.); paga-paga (Mag.); poás (Tag.); sagadan (Mbo.); saan-putí (Bik.); salá (Bis.); sararu (Bag.); tolotigri (P. Bis.); uás (Ilk., Ting.); uás-na purau (Ilk.).

30. PARANEPHELIUM Miquel

PARANEPHELIUM XESTOPHYLLUM Miq. Fl. Ind. Bat. Suppl. (1861) 509; Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447.

Mindanao (Zamboanga), Williams 2361. In forests. Burma, Sumatra.

31. DODONAEA Linnaeus

DODONAEA VISCOSA (Linn.) Jacq. Enum. Pl. Carib. (1760) 19; DC. Prodr. 1 (1824) 616; F.-Vill. Novis. App. (1880) 54; Vidal Sinopsis Atlas (1883) 21, t. 35, f. A, Rev. Pl. Vasc. Filip. (1886) 99; Radlk. in Perk. Frag. Fl. Philip. (1904) 66 (var. *vulgaris* Benth., f. *burmanniana* Radlk.), Philip. Journ. Sci. 8 (1913) 447 (var. *vulgaris* Benth., f. *repanda* Radlk., f. *burmanniana* Radlk., var. *angustifolia* Benth.); Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 35, Philip. Journ. Sci. 3 (1908) Bot. 80, Sp. Blancoanae (1918) 242.

Ptelea viscosa Linn. Sp. Pl. (1753) 118.

Dodonaea angustifolia Linn. f. Suppl. (1781) 218; Blanco Fl. Filip. (1837) 312, ed. 2 (1845) 217, ed. 3, 2 (1878) 40; Miq. Fl. Ind. Bat. 1² (1858-59) 580.

Throughout the Philippines along the seashore; in regions subject to a pronounced dry season extending inland and ascending to 2,000 m. Pan-tropic.

Local names: Dumánai (Ig.); haguíui (Tag.); kalapínai (Tag.); kasi-rag (Sbl.); lugad (Kuy.); tabau (Tag.); takud (C. Bis.); tubu-tubu (C. Bis.); sagása (P. Bis., C. Bis.).

32. GANOPHYLLUM Blume

GANOPHYLLUM FALCATUM Blume Mus. Bot. Lugd.-Bat. 1 (1850) 230; Oliver in Hook. Ic. III 4 (1880) 5, *t. 1308*; Engl. in DC. Monog. Phan. 4 (1883) 168; Miq. Fl. Ind. Bat. 1² (1858-59) 655; F.-Vill. Novis. App. (1880) 41; Vidal Phan. Cuming. Philip. (1885) 101, Rev. Pl. Vasc. Filip. (1886) 80; Valetton & Koord. in Ic. Bogor. 1 (1897) 58, *t. 17*; Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 447.

Ganophyllum obliquum Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 30, Philip. Journ. Sci. 1 (1906) 88, non *Boswellia obliqua* Blanco.

Luzon (Cagayan, Ilocos Sur, Bontoc, Union, Nueva Ecija, Pampanga, Bulacan, Bataan, Rizal), Mindoro, Palawan, Tablas, Panay, Guimaras, Negros, Mindanao. In dry forests at low and medium altitudes. Andaman Islands, Java, New Guinea, northeastern Australia.

Local names: Arañgan (Ilk.); arañgin (Ilk.); bagusalai (C. Bis.); gógo (Ilk., Ibn.); gogolíngin (Pamp.); gugo (Tag., P. Bis.); gugulángin (Pamp.); gogonglángil (Tag.); halas (P. Bis.); lángin (Tag.); odo (Tag.); palumpung (Bag.); panda-panda (Tag.); pararan (Bag.); salngén (Ilk.); tahuyai (P. Bis.); tugabi (Tag.); tulibas (Tag.).

33. HARPULLIA Roxburgh

HARPULLIA ARBOREA (Blanco) Radlk. in Sitz. Kgl. Bayer. Akad. 16 (1886) 404, Perk. Frag. Fl. Philip. (1904) 66, Philip. Journ. Sci. 8 (1913) Bot. 446; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 88, Sp. Blancoanae (1918) 243.

Ptelea arborea Blanco Fl. Filip. (1837) 63.

Seringia lanceolata Blanco op. cit. ed. 2 (1845) 45, ed. 3, 1 (1877) 85.

Blancoa arborea Blume Rumphia 3 (1847) 181; Walp. Ann. 2 (1850-51) 214; Miq. Fl. Ind. Bat. 1² (1858-59) 572.

Harpullia blancoi F.-Vill. Novis. App. (1880) 53; Vidal Phan. Cuming. Philip. (1885) 105, Rev. Pl. Vasc. Filip. (1886) 98; Merr. in Philip. Bureau Forestry Bull. 1 (1903) 35.

Harpullia cupanioides F.-Vill. Novis. App. (1880) 53; Vidal Synopsis Atlas (1883) 21, *t. 35, f. B*, non Roxb.

Harpullia imbricata Thwaites Enum. Pl. Ceyl. (1859) 56.

Throughout the Philippines in thickets and second-growth forests, at low and medium altitudes; usually common. India through Malaya to the Solomon Islands.

Local names: Abúyan (Ilk.); ambuyoán (Ilk.); antatúba (Neg.); bogna (Bag.); dalirugái (Ibn.); dulio (Sml.); dulís (Mag., Mbo.); huás (P. Bis.); kayaskas (Ilk.); magalad (Tagb.); magalat (Bik.); magantimus (Mag.); malatúbas (Bik.); maramblág (Ibn.); mama-an (Tagb.); oás (Sbl., Tag.); poás (Tag.); puás (Tag.); riñgis (Tagb.); toual (Bag.); uás (Ibn., Ilk., Tag.); uás-na-puráu (Ilk.).

HARPULLIA CUPANIOIDES Roxb. Hort. Beng. (1814) 86, *nomen nudum*, Fl. Ind. ed. 2, 1 (1832) 645; Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 448.

Harpullia confusa Blume Rumphia 3 (1847) 176; Ceron Cat. Pl. Herb. Manila (1892) 55.

Catanduanes, Panay, Siquijor, Sulu Archipelago, Merrill 5288, Piper 397, B. S. 35267 Ramos & Pascasio, 32391 McGregor, 30150 Ramos, 35569, 35578 Martelino & Edaña, 36326 Yates. In forests at low altitudes, ascending to 600 m. India to southern China southward through Malaya to New Guinea.

Local name: Buka-buka (Sul.).

HARPULLIA MACROCALYX Radlk. in Philip. Journ. Sci. 8 (1913) Bot. 448, 473.

Luzon (Benguet, Rizal, Laguna), Loher 5891, F. B. 21294 Sandkuhl. In forests at medium altitudes, ascending to 1,500 m. Endemic.

EXCLUDED GENERA

ORNITHROPE TRIANDRA Blanco Fl. Filip. (1837) 291.

Schmidelia triandra Blanco op. cit. ed. 2 (1845) 218, ed. 3, 2 (1878) 42.

This species is unrecognizable from Blanco's very short and imperfect description. F.-Villar erroneously reduced it to *Schleichera trijuga* Willd., a genus and species unknown from the Philippines.

SCHLEICHERA REVOLUTA Camb.; F.-Vill. Novis. App. (1880) 52.

SCHLEICHERA TRIJUGA Willd.; F.-Vill. l. c.; Vidal Sinopsis Atlas (1883) 22, t. 35, f. E.

Vidal's figure, a flower, is unrecognizable.

SARCOPTERYX MELANOPHLOEA Radlk.; F.-Vill. Novis. App. (1883) 350.

SARCOPTERYX SQUAMOSA Radlk.; F.-Vill. l. c.

XEROSPERMUM NORONHIANUM Blume; F.-Vill. op. cit. 53.

SABIACEAE

1. **SABIA** Colebrooke

SABIA PHILIPPINENSIS C. B. Rob. in Bull. Torr. Bot. Club 35 (1908) 70, 74.

Luzon (Ilocos Norte, Abra, Bontoc, Benguet), Williams 1445, Elmer 5866, Merrill 7708, B. S. 5822, 33240, 26973 Ramos, 37994 Ramos & Edaña, 31674 Santos. In thickets at medium altitudes, ascending to 2,300 m. Endemic.

Local names: Baybayok (Ig.); kopdas (Ig.); uakal (Ig.); udok (Ig.).

SABIA RETICULATA Elm. Leaf. Philip. Bot. 2 (1909) 579.

Luzon (Laguna, Sorsogon), Catanduanes, Negros, Mindanao (Lanao), Elmer 10027, 15562, Clemens 714, Baker 3699, B. S. 23593, 30367 Ramos. In thickets and forests up to 900 m altitude. Endemic.

Local names: Buñgoi (Bag.); dadabu (Bag.).

2. MELIOSMA Blume

MELIOSMA ACUMINATISSIMA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 36.

Luzon (Tayabas, east coast). *B. S. 19417 Ramos*. In primary forests at or above 1,000 m altitude. Endemic.

MELIOSMA BONTOCENSIS Merr. in Philip. Journ. Sci. 20 (1922) 403.

Luzon (Bontoc), *B. S. 37756 Ramos & Edaño*. In the mossy forest, altitude 1,900 m. Endemic.

MELIOSMA BRACHYBOTRYS Merr. in Philip. Journ. Sci. 12 (1917) Bot. 275.

Luzon (Tayabas, east coast), *B. S. 26567 Ramos & Edaño*. In forests at medium altitudes. Endemic.

MELIOSMA LOHERI Merr. in Philip. Journ. Sci. 10 (1915) Bot. 38.

Luzon (Ifugao, Bontoc, Benguet), *Vanoverbergh 1131, F. B. 25169 Garcia, B. S. 19630 McGregor, 38000, 40491 Ramos & Edaño*. In forested ravines, altitude 1,400 to 1,600 m. Endemic.

Local name: Lasuit (Bon.).

MELIOSMA LUZONENSIS Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 24.

Luzon (Benguet), *Elmer 6267*. In forests on Mount Santo Tomas at or above 1,800 m. Endemic.

MELIOSMA MACGREGORII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 37.

Luzon (Ifugao, Lepanto), *Sandkuhl 312, Merrill 4600, B. S. 19749 McGregor*. In ravines in the mossy forest, altitude about 2,100 m. Endemic.

MELIOSMA MACROPHYLLA Merr. in Philip. Journ. Sci. 7 (1912) Bot. 294.

Meliosma tongcalingii Elm. Leaf. Philip. Bot. 8 (1915) Bot. 2815.

Luzon (Benguet, Bulacan, Laguna, Camarines), Samar, Leyte, Mindanao (Davao), *Merrill Phil. Pl. 483, Wenzel 1554, B. S. 24368 Ramos, Elmer 15322, 18252*. In primary forests at low and medium altitudes, ascending to 900 m. Endemic.

Local names: Agosos (Tag.); arokong (Ig.); magasorod (Bag.); morau (S. L. Bis.); muñgapong (Bik.).

MELIOSMA MEGALOBOTRYS Merr. in Philip. Journ. Sci. 11 (1916) Bot. 16.

Luzon (Sorsogon), *B. S. 23516 Ramos, Elmer 16014* as *M. sorsogonensis* Elm. In forests. Endemic.

MELIOSMA MONOPHYLLA Merr. in Philip. Journ. Sci. 4 (1909) Bot. 286.

Luzon (Rizal), *Merrill 2339, Phil. Pl. 1019, F. B. 431, 3406 Ahern's collector*. In forests at medium altitudes. Endemic.

Local name: Malaligás (Tag.).

MELIOSMA MULTIFLORA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 25.

Luzon (Bontoc, Benguet, Zambales, Bataan), Mindanao (Bukidnon). In the mossy forest and in damp thickets on exposed slopes, altitude 1,300 to 2,400 m; common in Benguet. Endemic.

Local names: Adopó (Ig.); adupóng (Ig.); aropóng (Ig.); bantinan (Ig.); kamúg (Ig.).

MELIOSMA PAUCINERVIA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 39.

Mindanao (Zamboanga); *B. S.* 16436 Reillo. In forests at low altitudes. Endemic.

MELIOSMA PENDULA Merr. in Govt. Lab. Publ. (Philip.) 29 (1905) 25.

Luzon (Lepanto, Benguet), *Elmer* 6245, *B. S.* 31679 Santos, 40242, 46419 Ramos & Edaño, *F. B.* 25146 Leaño. In the mossy forest, altitude 2,000 to 2,300 m. Endemic.

Local name: Anítap (Ig.).

MELIOSMA RETICULATA Merr. in Philip. Journ. Sci. 5 (1910) Bot. 195.

Luzon (Benguet, Bontoc), *B. S.* 5594 Ramos, 37769 Ramos & Edaño, *F. B.* 15803 Curran. In forests up to 1,800 m altitude. Endemic.

MELIOSMA SUMATRANA (Jack) Walp. Ann. 1 (1848) 135; Miq. Fl. Ind. Bat. 1² (1858-59) 617.

Millingtonia sumatrana Jack in Malay. Miscel. 2⁷ (1822) 30.

Meliosma nitida Blume Cat. Gew. Buitenz. (1823) 32; Rumphia 3 (1847) 202, t. 169; Koord. & Val. in Meded. Lands Plantent. 61 (1903) 117.

Irina integerrima Blume Bijdr. (1825) 230.

Mindanao (Lanao, Davao, Surigao, Agusan, Zamboanga, Bukidnon), *F. B.* 20620 Miranda, 27000 Mallonga, 25173 Alvarez, *B. S.* 15713 Fénix, 37368, 39054, 39101 Ramos & Edaño, Clemens 458, 799, 637, 528, Wenzel 1838, *Elmer* 10531 as *Sabia*, 13297, 13771, 11178 as *Meliosma apoensis* Elm. In forests at low and medium altitudes, ascending to at least 1,200 m. Malay Peninsula, Sumatra, Java, Borneo.

Local names: Garong (Sub.); kadabudabo (Buk.); magobaylung (Mbo.); sumagasa (Bag.); yagabogan (Mbo.).

MELIOSMA SYLVATICA Elm. Leaf. Philip. Bot. 2 (1908) Bot. 492.

Luzon (Tayabas), *Elmer* 7891, 9132. In primary forests, altitude about 750 m. Endemic.

MELIOSMA VULCANICA Merr. in Philip. Journ. Sci. 11 (1916) Bot. 15.

Luzon (Sorsogon), Mindoro, *B. S.* 23657, 40998 Ramos. On forested slopes, altitude about 350 m. Endemic.

BALSAMINACEAE

1. IMPATIENS Rivinius

IMPATIENS AHERNII Hook f. in Kew Bull. (1909) 284, 287.

Luzon (Rizal), *F. B.* 3367 Ahern's collector, *Elmer* 12579. In shaded places on and about limestone cliffs at low and medium altitudes. Endemic.

IMPATIENS BALSAMINA Linn. Sp. Pl. (1753) 938; Miq. Fl. Ind. Bat. 1² (1858-59) 130; F.-Vill. Novis. App. (1880) 33; Ceron Cat. Pl. Herb. Manila (1892) 35; Merr. Fl. Manila (1912) 307, Sp. Blanco-

anae (1918) 243; Hook. f. in Kew Bull. (1909) 283, 285 (incl. f. *diplocycla* Hook f.).

Impatiens triflora Blanco Fl. Filip. (1837) 636, ed. 2 (1845) 443, ed. 3, 3 (1879) 32, t. 424, non Linn.

Fairly common in cultivation in different forms, sometimes occurring as an escape in waste places. A native of India, now cultivated in all warm countries. Balsam.

Local names: Kamantigi (Ilk., Tag., Pamp.); saungga (Sul.); solónḡa Bis.); suranga (Bik., Bis.).

IMPATIENS BARNESII Hook. f. in Kew Bull. (1909) 284, 287.

Luzon (Benguet), *F. B. 954 Barnes, 26404 Oteyza & Garcia, B. S. 12904 Fénix, Baker 4084, Merrill Phil. Pl. 842, Elmer 6065*. On and about limestone boulders on open slopes, altitude 1,200 to 1,500 m. Endemic.

Local name: Lagu (Ig.).

IMPATIENS BIGANENSIS Hook. f. in Kew Bull. (1909) 283, 286.

Luzon (Rizal), (*Loher 1650*). Not seen; to be compared with *I. meyeniana* Walp. Endemic.

IMPATIENS BURKEI Hook. f. in Kew Bull. (1909) 283, 286.

Mindoro, Panay, Mindanao (Agusan, Davao, Bukidnon, Lanao), *F. B. 4391, 12091 Merritt, 32311 McGregor, 38637 Ramos & Edaña, 21419 Escritor, F. B. 26566 Rola, 25256 Alvarez, Elmer 13779, Weber 1067, Wester*. Along shaded streams in forests, altitude 300 to 1,200 m. Endemic.

Local names: Kalohoglohog (Mbo.); kamantiging-gúbat (Tag.); odang-ódang (Bag.); salúnka (Buk.).

IMPATIENS CAVITEANA Hook. f. in Kew Bull. (1909) 283, 286.

Luzon (Cavite), *Merrill 4179*. On cliffs and along shady banks of streams, altitude 100 to 300 m; probably referable to *I. meyeniana* Walp. Endemic.

IMPATIENS CLEISTOGAMA Hook. f. in Kew Bull. (1909) 285, 288.

Luzon (Rizal), (*Loher 6780*). Not seen; to be compared with *I. meyeniana* Walp. Endemic.

IMPATIENS CLEMENSAE Hook. f. in Kew Bull. (1909) 283, 286.

Mindanao (Lanao), *Clemens 201*. Altitude about 750 m; to be compared with *I. burkei* Hook. f. Endemic.

IMPATIENS CRYPTOGRAMA Hook. f. in Kew Bull. (1909) 285, 288.

Luzon (Rizal), (*Loher 6752*). Not seen; to be compared with *I. meyeniana* Walp. Endemic.

IMPATIENS CURRANII Hook. f. in Kew Bull. (1909) 285, 288.

Luzon (Cavite), *F. B. 7674 Curran*. On slopes, altitude 340 m; to be compared with *I. meyeniana* Walp. Endemic.

IMPATIENS ELMERI Hook. f. in Kew Bull. (1909) 284, 286.

Luzon (Benguet), *Merrill 4705, B. S. 31916 Fénix*. Very common in the mossy forest at Pauai, altitude about 2,400 m. Endemic.

IMPATIENS FILICAULIS Hook. f. in Kew Bull. (1909) 285, 288.

Luzon (Rizal), (*Loher 6763, 6764*). Not seen. Endemic.

IMPATIENS HUTCHINSONII Hook. f. in Kew Bull. (1909) 283, 286.

Mindanao (Misamis), *F. B. 4564 Mearns & Hutchinson*. In forests; to be compared with *I. burkei* Hook. f. Endemic.

IMPATIENS KLEMMEANA Hook. f. in Kew Bull. (1909) 284, 287.

Luzon (Lepanto, Benguet), *F. B. 5688 Klemme, Merrill 4301*. On open banks and cliffs, altitude 750 to 1,500 m. Endemic.

Local name: Lilidau (Ig.).

IMPATIENS LOHERI Hook. f. in Kew Bull. (1909) 285, 288.

Luzon (Ifugao, Lepanto, Nueva Vizcaya), *Merrill 4547, B. S. 19845, 20073 McGregor*. In ravines in the mossy forest, altitude 1,800 to 2,200 m. Endemic.

IMPATIENS MANILLENSIS Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843)

Suppl. 1: 317; F.-Vill. Novis. App. (1880) 34; Hook. f. in Kew Bull. (1909) 284, 286, 289.

Luzon (Laguna), *Meyen* in herb Berol., collected at Jala Jala. Endemic.

IMPATIENS MEARNsii Hook. f. in Kew Bull. (1909) 284, 287.

Luzon (Benguet), *B. S. 3416 Mearns*, without notes; to be compared with *I. elmeri* Hook. f. Endemic.

IMPATIENS MERRILLII Hook. f. in Kew Bull. (1909) 283, 286.

Luzon (Rizal), (*Loher 6768*). Not seen. Endemic.

IMPATIENS MONTALBANICA Hook. f. in Kew Bull. (1909) 285, 287.

Luzon (Rizal), *B. S. 6133, 9528 Robinson, Merrill 6235*. On and about limestone cliffs in shaded places, altitude about 75 m. Endemic.

IMPATIENS POLYACTINA Hook. f. in Kew Bull. (1909) 283, 286.

Luzon (Benguet), *Williams 2012*. On open slopes, altitude about 1,200 m. Endemic.

IMPATIENS PUBISEPALA Hook. f. in Kew Bull. (1909) 284, 287.

Luzon (Rizal), (*Loher 1651*). Not seen.

IMPATIENS QUERCETORUM Hook. f. in Kew Bull. (1909) 284, 286.

Luzon (Benguet), *B. S. 4360, 4381, 4417 Mearns, 8395 McGregor*. In the mossy forest, altitude about 2,400 m; probably the same as *I. elmeri* Hook. f. Endemic.

IMPATIENS RAMOSII Hook. f. in Kew Bull. (1909) 285, 287.

Luzon (Rizal), *B. S. 4573, 4672 Ramos*. Along streams in forests at medium altitudes. Endemic.

IMPATIENS RIZALIANA Hook. f. in Kew Bull. (1909) 284, 287.

Luzon (Rizal), *Merrill 6234, Phil. Pl. 49, B. S. 9524 Robinson*. On and about limestone cliffs in shaded places, altitude about 150 m. Endemic.

IMPATIENS VIDALII Hook. f. in Kew Bull. (1909) 284, 287.

Panay, (*Vidal 2245*). Not seen. Endemic.

EXCLUDED SPECIES

IMPATIENS LATIFOLIA Linn.; F.-Vill. Novis. App. (1880) 34.

RHAMNACEAE

1. VENTILAGO Gaertner

VENTILAGO BRUNNEA Merr. in Philip. Journ. Sci. 13 (1908) Bot. 25.

Luzon (Tayabas, east coast), *B. S.* 29053 Ramos & Edaño. In forests at low altitudes. Endemic.

VENTILAGO DICHOTOMA (Blanco) Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 32, Philip. Journ. Sci. 4 (1909) Bot. 287, Sp. Blancoanae (1918) 243.

Enrila dichotoma Blanco Fl. Filip. (1837) 709.

Ventilago monoica Blanco op. cit. ed. 2 (1845) 124, ed. 3, 1 (1877) 223.

Kurrimia gracilis Vidal Rev. Pl. Vasc. Filip. (1886) 89.

Ventilago gracilis Merr. & Rolfe in Philip. Journ. Sci. 3 (1908) Bot. 110.

Luzon (Laguna, Rizal, Sorsogon), Palawan, *F. B.* 26838 Mabesa, *B. S.* 3303 Ramos, *Elmer* 17671, 15887, *Merrill* 9407, *Sp. Blancoanae* 633, *Phil. Pl.* 1062, *Loher* 4686, 4685. In thickets and forests at low and medium altitudes. Endemic.

Local names: Pakpák-tutubí (Tag.); salápau (Tag.); salípau (Tag.).

VENTILAGO LANCEOLATA Merr. in Philip. Journ. Sci. 10 (1915) Bot. 40.

Biliran, *B. S.* 18646 McGregor. In thickets at low altitudes. Endemic.

VENTILAGO LUCENS Miq. Fl. Ind. Bat. Suppl. (1860-61) 330; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 287.

Luzon (Tayabas), *Merrill* 1105. In thickets or forests at low altitudes, the identification not certainly correct. Sumatra.

VENTILAGO LUZONIENSIS Vidal Rev. Pl. Vasc. Filip. (1886) 90; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 287.

Ventilago maderaspatana Vidal Sinopsis Atlas (1883) 21, t. 32, f. D; ? F.-Vill. Novis. App. (1880) 48, non Gaertn.

Luzon (Tarlac, Rizal), *Vidal* 198, *Loher* 5823. Probably in thickets at low altitudes. Endemic.

VENTILAGO MULTINERVIA Merr. in Philip. Journ. Sci. 9 (1914) Bot. 369.

Luzon (Apayao), Leyte, *Wenzel* 849, 1390, *B. S.* 28180 Fénix. In thickets at low altitudes. Endemic.

VENTILAGO OBLONGIFOLIA Blume Bijdr. (1826) 1144; Miq. Fl. Ind. Bat. 1^a (1856) 640; Merr. in Philip. Journ. Sci. 4 (1909) Bot. 287.

Luzon (Ilocos Norte, Laguna, Bulacan), Mindoro, Palawan, *F. B.* 21408 Villamil, *B. S.* 27197, 39822 Ramos, 264 Bermejós, *Elmer* 12921. In thickets and forests at low altitudes. Malay Peninsula, Java.

VENTILAGO PALAWANENSIS Elm. Leaf. Philip. Bot. 5 (1913) 1829.

Palawan, *Elmer* 13224. In primary forests along streams, altitude about 150 m. Endemic.

2. SMYTHEA Seemann

SMYTHEA PACIFICA Seem. in Bonplandia 9 (1861) 255, 10 (1862) 35, t. 9, Fl. Vit. (1865) 41, t. 11; Ridl. in Journ. Str. Branch Roy. As. Soc. 75 (1917) 23.

Berchemia trichantha Miq. Fl. Ind. Bat. Suppl. (1860-61) 331.

Smythea reticulata King in Journ. Roy. As. Soc. Bengal 65² (1896) 381.

Ventilago fasciculiflora Merr. in Philip. Journ. Sci. 11 (1916) Bot. 287 (type from Amboina).

Santa Cruz Island, near Zamboanga, Mindanao, *Merrill 11626*. In thickets on broken coral limestone formation at sea level. Malay Peninsula, Penang, Sumatra, Borneo to the Moluccas, Timor Laut, Aru, the Solomon Islands, and Fiji.

Ventilago ? vitiensis A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 274 is not the same as *Smythea pacifica* Seem. Comparisons were made by Dr. B. L. Robinson of the Gray Herbarium, who has also supplied me with fragments of both Gray's and Seemann's types.

3. ZIZYPHUS Tournefort

ZIZYPHUS CREBRIVENOSA C. B. Rob. in Philip. Journ. Sci. 3 (1908) Bot. 201.

Samar, Mindanao (Agusan, Bukidnon, Zamboanga, Davao), *Williams 2335*, *Elmer 13451*, *Warburg 14719a*, *B. S. 15710 Fénix*, *17473 Ramos*. In primary forests along streams at low and medium altitudes. Endemic.

Local names: Isug (Bag.); Iapusan (Buk.); lalambod (Mbo.).

ZIZYPHUS CUMINGIANA Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 206.

Zizyphus sp. aff. *baclei* DC. Vidal Phan. Cuming. Philip. (1885) 104.

Luzon (Cagayan, Rizal, Laguna, Tayabas, Sorsogon), Alabat, Mindoro, Palawan, Samar, Leyte, Mindanao (Surigao, Zamboanga, Lanao) incl. *Elmer 14794* as *Z. bulusanensis* Elm. In thickets and forests at low and medium altitudes. Endemic.

Var. **PILOSA** var. nov.

A typo differt foliis subtus perspicue pilosis.

Luzon (Rizal, Camarines), Mindoro, *Merrill Phil. Pl. 1507*, *B. S. 12538 Ramos*, *21298 Escritor*, *33648 Ramos & Edaña*. In forests at low altitudes. Endemic.

Local names: Barikbik (Ilk.); maladukláp (Tag.); subit (Ig.).

ZIZYPHUS HUTCHINSONII Merr. in Philip. Journ. Sci. 4 (1909) Bot. 288.

Mindanao (Davao, Zamboanga), Basilan, *F. B. 3444 Hutchinson*, *27570*, *23050 Ferraris*, *De Mesa*, *26241 Ceballos*, *9265 Whitford & Hutchinson*. On forested slopes at low altitudes. Endemic.

Local names: Bila (Bag.); lumuluas (Mag.); mañgaluas (Mag.).

ZIZYPHUS INERMIS Merr. in Govt. Lab. Publ. (Philip.) 35 (1906) 37.

Luzon (Cagayan, Nueva Vizcaya, Rizal, Laguna, Camarines, Albay, Sorsogon), Mindoro, Palawan, Samar, Biliran, Masbate, Leyte, Negros, Mindanao (Agusan, Surigao, Lanao, Davao, Zamboanga). In forests at low altitudes. Celebes (*Koorders 18541* as *Z. celtidifolia*, non DC.).

Local names: Alipayas (Mbo.); bubunau (Sul.); bulilúsing (Ilk.); dalipatsan (P. Bis.); limingién (Ibn.); limbahan (Mbo.); olis-alanga (P. Bis.); pirok-kálaw (Bik.); salindángat (P. Bis.).

ZIZYPHUS JUJUBA (Linn.) Lam. Encycl. 3 (1789) 318; Blanco Fl. Filip. ed. 2 (1845) 120, ed. 3, 1 (1877) 215, *t.* 57; Miq Fl. Ind. Bat. 1¹ (1856) 644; F.-Vill. Novis. App. (1880) 48; Vidal Sinopsis Atlas (1883) 21, *t.* 22, *f.* B; Merr. Fl. Manila (1912) 308, Sp. Blancoanae (1918) 244.

Rhamnus jujuba Linn. Sp. Pl. (1753) 194, Blanco Fl. Filip. (1837) 172.

Zizyphus mauritiana Lam. Encycl. 3 (1789) 318.

Widely scattered in cultivation and as a semicultivated tree, scarcely naturalized. Introduced from tropical Asia. Universally known in the Philippines under the Spanish names *manzanas* and *manzanitas*.

ZIZYPHUS OTANESII Merr. in Philip. Journ. Sci. 10 (1915) Bot. 40.

Luzon (Pangasinan), *B. S.* 17964 *Otaness*. In thickets or forests at low altitudes. Endemic.

Local name: Dilap (Ilk.).

ZIZYPHUS PALAWANENSIS Elm. Leaflet. Philip. Bot. 5 (1913) 1828.

Palawan, *Elmer* 12891. In primary forests, altitude about 225 m; closely allied to the Malayan *Z. calophylla* Wall. Endemic.

ZIZYPHUS TALANAI (Blanco) Merr. Sp. Blancoanae (1918) 244.

Rhamnus talanai Blanco Fl. Filip. (1837) 171.

Zizyphus latifolia Blanco op. cit. ed. 2 (1845) 121, ed. 3, 1 (1877) 217. non Roxb.

Rhamnus zonulatus Blanco Fl. Filip. (1837) 172.

Zizyphus zonulata Blanco op. cit. ed. 2 (1845) 120, ed. 3, 1 (1877) 215; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 88, Fl. Manila (1912) 308.

Zizyphus xylopyrus F.-Vill. Novis. App. (1880) 48, non Willd.

Zizyphus arborea Merr. in Govt. Lab. Publ. (Philip.) 6 (1904) 11.

Northern Luzon (Cagayan) to Palawan and Mindanao. Common in forests at low altitudes. Endemic.

Local names: Agók (Ibn.); aligamén (Ilk.); balákat (Tag., Pamp.); bariañgo (Tagb.); biáa (Tag.); biága (Tag.); bigáa (Tag., P. Bis., S. L. Bis.); bonglas (Bis.); bunglas (Bis.); dagáa (Tagb.); dagáau (Mbo., C. Bis.); danlík (Tag.); diá (Sbl.); diáan (Pang.); digáa (Tag.); dirán (Ilk.); durán (Ilk.); ligáa (Tag., Sbl., Bik.); maglánka (Kuy.); talanai (Tag.).

ZIZYPHUS TRINERVIA (Cav.) Poir. in Lam. Encycl. Suppl. 3 (1813) 192;

Vidal Rev. Pl. Vasc. Filip. (1886) 91; Merr. in Philip. Journ. Sci. 1 (1906) Suppl. 88, Fl. Manila (1912) 308, Sp. Blancoanae (1918) 244.

Rhamnus trinervius Cav. Ic. 6 (1801) 3, *t.* 505, *f.* 1.

Zizyphus exserta DC. Prodr. 2 (1825) 21; Vidal Phan. Cuming. Philip. (1885) 104.

Rhamnus zizyphus Blanco Fl. Filip. (1837) 170, non Linn.

Zizyphus lotus Blanco op. cit. ed. 2 (1845) 121, ed. 3, 1 (1877) 216, *t.* 433, non Lam.

Zizyphus oenophia F.-Vill. Novis. App. (1880) 48, Vidal Sinopsis Atlas (1883) 21, *t.* 32, *f.* A, non Mill.

Celtis ferruginea Walp. in Nov. Act. Acad. Nat. Cur. 19 (1843) Suppl. 1: 424.

Luzon (Ilocos Norte, Union, Pangasinan, Zambales, Bulacan, Bataan, Rizal, Cavite, Batangas, Laguna, Tayabas). Common in thickets and secondary forests at low altitudes. Endemic.

Local names: Baluknít (Ilk.); déklap (Ilk.); diklab (Ilk.); dílap (Ilk.); díklap (Tag.); dúklap (Pang., Tag.); dúklap (Tag.); dukúláp (Tag.); laba-labá (Ilk.); lanotí (Ilk.); lígau (Tag.); malamansánas (Pamp.); malipaga (Tag.); maramansaníta (Ilk.); talanai (Tag.);

DOUBTFUL AND EXCLUDED SPECIES

ZIZYPHUS DALANTA Blanco Fl. Filip. ed. 2 (1845) 121, ed. 3, 1 (1877) 217; F.-Vill. Novis. App. (1880) 48; Merr. Sp. Blancoanae (1918) 244.

Rhamnus dalanta Blanco Fl. Filip. (1837) 171.

The exact status of this species cannot be determined from Blanco's very imperfect description; his specimens were from Bonbonon, southern Negros. The Bisayan name is given as *dalanta*, but this does not appear to be known in Bonbonan now.

ZIZYPHUS FUNICULOSA Ham.; F.-Vill. Novis. App. (1880) 48.

ZIZYPHUS JAVANENSIS Blume; F.-Vill. l. c.

4. *BERCHEMIA* Necker

BERCHEMIA PHILIPPINENSIS Vidal Rev. Pl. Vasc. Filip. (1886) 91; Ceron Cat. Pl. Herb. Manila (1892) 49.

Berchemia elmeri Schneider in Sargent Pl. Wils. 2 (1914) 220.

Luzon (Isabela, Benguet, Bontoc), Mindanao (Davao), Merrill 4268, Phil. Pl. 743, Vanoverbergh 651, Williams 1282, Elmer 11317, B. S. 7991 Ramos. In thickets on exposed slopes, altitude 1,200 to 1,600 m. Endemic.

Local names: Batikil (Bon.); dingsil (Bon.); odoadig (Ig.).

5. *SAGERETIA* Brongniart

SAGERETIA THEEZANS (Linn.) Brongn. in Ann. Sci. Nat. I 10 (1827) 360; F.-Vill. Novis. App. (1880) 48; Vidal Phan. Cuming. Philip. (1885) 104, Rev. Pl. Vasc. Filip. (1886) 92; Merr. in Philip. Journ. Sci. 5 (1910) Bot. 359.

Rhamnus theezans Linn. Mant. 2 (1771) 207.

Luzon (Bontoc, Benguet, Ilocos Sur, Zambales, Bataan, Rizal), Merrill 4381, 7610, Loher 5838, B. S. 4808, 5356, 5914, 5035 Ramos. In thickets, altitude 900 to 1,500 m. India to China and Formosa.

Local name: Adadinko (Ig.).

6. *RHAMNUS* Tournefort

RHAMNUS PHILIPPINENSIS C. B. Rob. in Philip. Journ. Sci. 6 (1911) Bot. 342.

Rhamnus formosana C. B. Rob. op. cit. 3 (1908) 201, non Matsum.

Luzon (Bontoc, Benguet, Nueva Vizcaya, Tayabas, Rizal), Mindoro, Williams 1121, Merrill 7701, Phil. Pl. 1711, Elmer 6379, Loher 5822, F. B. 4873 Curran, 15847 Merritt, B. S. 7005, 39478 Ramos, 29108, 29347 Ramos & Edaño. In thickets, altitude 600 to 1,800 m. Endemic.

Like *Rhamnus formosana* Mats. this species is allied to *R. nepalensis* Wall.

RHAMNUS MOLLIS Merr. in Philip. Journ. Sci. 20 (1922) 405.

Luzon (Bontoc), *B. S. 37689 Ramos & Edaña*. In the mossy forest, altitude about 1,600 m. Endemic.

RHAMNUS PULOGENSIS Merr. in Philip. Journ. Sci. 5 (1910) Bot. 359.

Luzon (Bontoc, Lepanto, Benguet, Rizal), *F. B. 18102 Curran, Merritt, & Zschokke, B. S. 37845, 40255, 40789 Ramos & Edaña*, leaves larger than in the type. In the mossy forest, altitude about 2,400 m. Endemic.

EXCLUDED SPECIES

RHAMNUS WIGHTII W. & A.; F.-Vill. Novis. App. (1880) 48.

7. COLUBRINA L. C. Richard

COLUBRINA ASIATICA (Linn.) Brongn. in Ann. Sci. Nat. I 10 (1827) 369; A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 277; Miq. Fl. Ind. Bat. 1¹ (1856) 648; F.-Vill. Novis. App. (1880) 48; Vidal Phan. Cuming. Philip. (1885) 104, Rev. Pl. Vasc. Filip. (1886) 92, Sinopsis Atlas (1883) 21, *t. 32, f. C.*; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 33, Philip. Journ. Sci. 1 (1906) Suppl. 88, 3 (1908) Bot. 80, 419, Fl. Manila (1912) 309, Sp. Blancoanae (1918) 245.

Ceanothus asiaticus Linn. Sp. Pl. (1753) 196; Cav. Ic. 5 (1799) 24, *t. 440, f. 1.*

Rhamnus carolinianus Blanco Fl. Filip. (1837) 169, ed. 2 (1845) 119, ed. 3, 1 (1877) 214, non Walt.

Along the seashore and borders of tidal streams throughout the Philippines. India to Africa, through Malaya to Australia and Polynesia.

Local names: Kabatíti (Tag.); kayaskás (Ilk.); paria (Bag.); palía-laut (Sul.); parid-la'ud (Sul.); uatitik (Tag., Bis.).

8. ALPHITONIA Reissek

ALPHITONIA ZIZYPHOIDES (Spreng.) A. Gray Bot. Wilkes U. S. Explor. Exped. (1854) 278; Merr. in Philip. Journ. Sci. 11 (1916) Bot. 286.

Rhamnus zizyphoides Spreng. Fl. Hal. Mant. (1807) 37, Syst. 1 (1825) 768.

Alphitonia excelsa Reiss. in Endl. Gen. Pl. (1840) 1098; F.-Vill. Novis. App. (1880) 49; Merr. in Philip. Journ. Sci. 2 (1907) Bot. 280, 11 (1916) Bot. 286.

Alphitonia moluccana Teysm. & Binn. Cat. Hort. Bogor. (1866) 221; Vidal Phan. Cuming. Philip. (1885) 104, Rev. Pl. Vasc. Filip. (1886) 92 (*moluccensis*).

Luzon (Benguet, Ifugao, Rizal, Laguna, Camarines), Mindoro, Palawan, Samar, Leyte, Panay, Negros, Guimaras, Mindanao (Surigao). In forests at low and medium altitudes. Borneo through the Moluccas to northeastern Australia and Polynesia.

Local names: Alangsohan (C. Bis.); bugas (Ig.); dunglu (Tag.); karambau (Bag.); tañgulai (Tag.); tulo (Tag.); uakatan (C. Bis.).

9. GOUANIA Jacquin

GOUANIA JAVANICA Miq. Fl. Ind. Bat. 1¹ (1856) 649; King in Journ. As. Soc. Beng. 65² (1896) 383; Pitard in Lecomte Fl. Gén. Indo-Chine 1 (1912) 932.

Luzon (Abra, Bontoc, Laguna, Tayabas), Polillo, Mindoro, Leyte, Mindanao (Agusan, Davao, Zamboanga), Wenzel 976, 474, Elmer 13552, Whitford 651, Vanoverbergh 2102, B. S. 2069, 6882 Robinson, B. S. 7117 Ramos, F. B. 26119 Mabesa, 16516 Curran & Merritt. In thickets and forests at low and medium altitudes; probably better placed as a pubescent variety of *Gouania tiliaefolia* Lam. To be compared with *Gouania denticulata* Smith. Indo-China, Malay Peninsula, Sumatra, Java, Celebes.

Local names: Kopkopéyes-ti-ásò (Ilk.); litiran (Tag.); pahampak (Pamp.); ruñgo-ruñgo (Ilk.).

GOUANIA TILIAEFOLIA Lam. Encycl. 3 (1789) 5; DC. Prodr. 2 (1825) 40; Roxb. Pl. Coromandel 1 (1795) 67, t. 98.

Retinaria scandens Gaertn. Fruct. 2 (1791) 187, t. 120, f. 4.

Gouania retinaria DC. Prodr. 2 (1825) 40.

Gouania microcarpa Rolfe in Journ. Bot. 23 (1885) 211; Vidal Phan. Cuming. Philip. (1885) 104, Rev. Pl. Vasc. Filip. (1886) 92; Merr. Fl. Manila (1912) 309, Sp. Blancoanae (1918) 245, non DC.

Gouania domingensis Blanco Fl. Filip. (1837) 196, ed. 2 (1845) 138, ed. 3, 1 (1877) 248, non Linn.

Gouania leptostachya DC. Prodr. 2 (1825) 40; F.-Vill. Novis. App. (1880) 49; Vidal Sinopsis Atlas (1883) 21, t. 32, f. E; Merr. in Govt. Lab. Publ. (Philip.) 27 (1905) 33; King in Journ. As. Soc. Beng. 65² (1896) 383; Pitard in Lecomte Fl. Gén. Indo-Chine 1 (1912) 933.

Gouania microcarpa DC. var. *subglabra* Elm. Leaf. Philip. Bot. 8 (1915) 2801.

Northern Luzon to Mindanao. In thickets at low and medium altitudes. India to the Mascarene Islands, Indo-China, and Malaya.

Local names: Litiran (Tag.); liua-a (Bag.); mañgauhui (Mbo.); pahampak (Pamp.); ruñgo-ruñgo (Ilk.).

ADDITION TO PAGE 228

RUBUS MINDANAËNSIS Focke in Ann. Conserv. Jard. Bot. Genève 20 (1919) 103.

Mindanao (Davao), (Warburg 14483). Endemic.

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